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CYPRUS

ANNUAL
MEDICAL & SANITARY REPORT
1937

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NICOSIA:
PRINTED AT THE CYPRUS GOVERNMENT PRINTING OFFICE
1938

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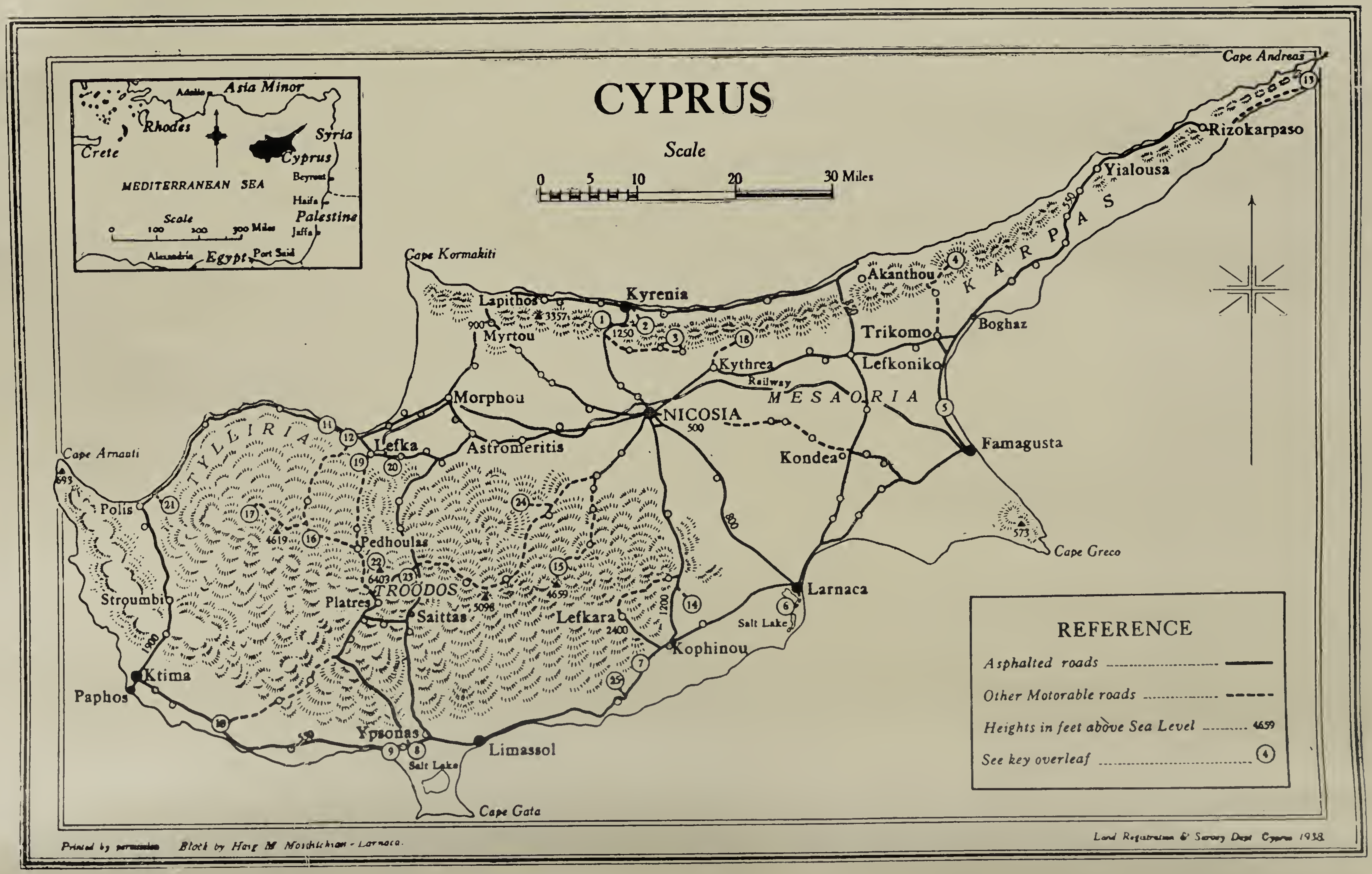

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1938

MEDICAL DEPARTMENT,
NICOSIA, CYPRUS,
27th May, 1938.

Sir,

I have the honour to submit for the information of His Excellency the Governor, and for transmission to the Right Honourable the Secretary of State, the Medical Report on the Health and Sanitary Conditions of Cyprus, for the year 1937, *together with the returns, etc., appended thereto.*

2. *I also desire to take this opportunity of again extending my thanks to the entire Medical Department Staff for their continuous support during the* 12 *months under review.*

3. *In particular I wish to record my appreciation of the splendid work the Cypriot Medical Officers and Health Officers have done and continue to do. Many of these officers have been given highly responsible posts and have discharged their responsibilities and the duties pertaining to their offices to my complete satisfaction.*

I have the honour to be,
Sir,
Your obedient Servant,

E. A. NEFF,
Director of Medical Services.

The Honourable
The Colonial Secretary,
Cyprus.

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Annual Medical and Sanitary Report for the Year 1937.

GENERAL REMARKS.

The year 1937 will be long remembered for the epidemic of Meningococcal Meningitis which started during the last quarter of 1936 and reached its peak during the early months of the year, continued sporadically through the spring and well into the early summer, to assume mild epidemic form again during October, November and December. 836 cases were notified, isolated and treated of which 276 terminated fatally giving a death rate of approximately 33%. This epidemic has been recorded in detail and is included as an Appendix to this Report. To move, isolate and treat the cases presenting and to care for contacts necessitated accommodation and machinery which did not exist and the resources of the whole Department had to be directed to this end. All Department activities, with the exception of necessary routine, were perforce dropped. It was necessary to open Isolation hospitals at Polemidhia, Paphos and Nicosia and temporary stations at Kato Kopia, Episkopi and other villages where incidence was locally high. Episkopi—a village in the Paphos District—presented a high carrier rate and so many cases that the whole village was placed under quarantine for a considerable period of time. Excellent isolation hospitals, to accommodate 60 patients, were hurriedly erected by the Cyprus Mines Corporation at Pendayia and the Company isolated and treated there not only cases occuring amongst their own employees and their families but also all others from the mining area and the Tilliria District. A Government Health Officer was posted for duty there to assist Dr. Smitten, Chief Medical Officer of the Cyprus Mines Corporation, and his medical staff.

Overcrowding was controlled as far as possible by prohibiting under the Quarantine Regulations the holding of fairs, carnivals and all other ceremonies and celebrations which would tend to draw crowds from the Island generally; by removing alternate seats from theatres and by an intensive educational programme conducted through the press and the District Administration. Schools were closed only when cases occurred in the school, it being felt that most of the children were safer in their well-ventilated school-buildings.

The sudden manner in which the epidemic developed during the first quarter of the year and the alarmist attitude of the local press caused considerable panic amongst the public and there was a big demand for preventive drugs for local application. In addition a wide-spread epidemic of mild Influenza complicated matters in that many sufferers imagined the initial symptoms to be those of Meningitis and such cases had to be seen by Medical Officers who by this time were doing duty over practically the 24 hours.

Previous epidemics in Cyprus have been repeated the following year and knowing this the Resident Director of the Cyprus Mines Corporation, in whose area the disease had been particularly prevalent, was approached as to whether his Company would co-operate with Government in protective immunization on a large scale. During the year a small quantity of vaccine obtained from Parke, Davis and Company, London, had been utilized by Dr. Smitten to protect certain staff working in intimate contact with the disease but beyond some 100 workers so inoculated nothing further had been done. As the use of vaccine in the prevention of Meningococcal Meningitis had been apparently limited to countries where the disease was not present in true epidemic form, it was impossible to speak convincingly as to its value but the Resident Director of the above Company, encouraged by his Chief Medical Officer, finally agreed to participate and a vaccine was prepared in the Bacteriological Laboratories of St. Mary's Hospital, London, from Near East strains of the Meningococcus and supplied to us by Parke, Davis and Company, at a very reasonable figure indeed. Utilizing this during October, November and December over 30,000 people were inoculated. A mobile Government Team of inoculators was organized in charge of Dr. C. E. Bevan consisting of two Medical Officers, a British Sister, a Cypriot Nurse, a Compounder, three Sanitary Inspectors, two clerks, and three Policemen, which visited villages outside the mining area where incidence was high during the epidemic period. Two injections at an interval of 10 days were necessary for immunization, a small fee was charged and all persons over 1 year of age who presented themselves were injected. A complete record was taken utilizing a card system and through recording members of the same family, whether inoculated or not, a good control group resulted. The Government Team inoculated (2 injections) 13,014 people, Health Officers and Medical Officers 10,388, and the Cyprus Mines Corporation 6,657. That vaccine is valuable in the prevention of epidemic Meningitis there seems no doubt and a serious second epidemic has not resulted. Dr. I. H. Maclean, a senior Bacteriologist from the staff of St. Mary's Hospital, has been working with the Department and a detailed report covering the whole programme of inoculation and the results will later be published.

Epidemics usually forcefully draw attention to matters previously overlooked or neglected, and housing, both in the mining area and over the Island generally, have as a result of this epidemic been carefully inspected and found in many places inadequate and unsatisfactory. As a result new legislation has been found necessary and when enacted will result in wide-spread improvement in that it will enable the Department to deal with overcrowding and badly ventilated premises.

The Cyprus Mines Corporation, realizing the need of extra accommodation for miners and their families, rushed into a huge building programme and by the end of the year had, at very considerable expense, provided additional permanent and temporary buildings for the accommodation of 1,437 persons. This programme is to continue and will eventually lead to sufficient houses being available for all their staff and labour.

The Tunnel Asbestos Cement Company Ltd. at Amiandos has also embarked on a comprehensive scheme of housing for their labourers.

Nicosia Jubilee Hospital.

Work on the new Nicosia Jubilee Hospital was by the end of the year proceeding rapidly and the whole building should be completed, equipped and brought into use early in 1939. It is unfortunate that early cost estimates were unduly low for now it is thought the completely equipped building will cost something like £35,000 which sum is almost double that of the original estimate. The increased cost of steel and almost all imported materials together with the necessity of additional kitchen and other equipment—not previously estimated for—has been responsible but even so it is generally agreed that the above figure (roughly £295 per bed) is very reasonable for a hospital built and equipped for 122 patients in modern airy wards and quiet private accommodation. It should also be remembered that revenue will be substantially benefited by the extra beds thus made available.

New Sanatorium and Tuberculosis.

As foreshadowed last year, His Excellency appointed a representative Committee of which the Chairman was the Director of Medical Services to tour the Island and select a suitable site for the new Sanatorium. The Committee met on several occasions, travelled widely and had almost given up hope of finding a site which would be altogether suitable when they visited an area, previously seen by His Excellency the Governor and the Director of Medical Services on a Sunday excursion in His Excellency's car, and on the spot unanimously agreed that their work was completed. The chosen site is situated in a delightfully sheltered valley at an elevation of 4,000 feet, has a southern exposure, and is well sheltered from the north. Water is available in quantity and there is sufficient flat land for future extension, for patients' gardens, etc. A good road passes the door and malaria incidence will be negligible at that altitude. Following the selection of the site, the land had to be acquired. The architect has already put up preliminary plans and it is expected that building will actually commence during July or August, 1938. The Sanatorium, when completed, will be utilized for early cases who, through care and treatment, may be expected to come eventually to quiescence and discharge while the present Sanatorium at Athalassa will be retained for advanced cases requiring isolation and treatment.

Much progress has been made in the general Tuberculosis control programme during the year under review and as the year ended the building for the Demetriou Tuberculosis Dispensary at Larnaca was finished, equipped and ready to receive patients for examination, advice, and out-patient treatment. For several months, during the latter part of the year, a Tuberculosis Nurse, trained at the American Nursing School at Istanbul, had been doing follow-up work with patients in that District and so was available for the Dispensary when opened. Dr. Noel D. Bardswell, has signified his willingness to take charge of this Dispensary during 1938 and at the same time do an intensive survey of the Larnaca District working with school-children and examining all patients and contacts of patients in that District. He will be assisted in his work by Dr. C. E. Bevan who is to be appointed Tuberculosis Officer to Government and who will eventually carry on the programme of work organized by Dr. Bardswell. Nurse Commissioner Jays will assist the two Medical Officers as will-Department personnel whenever required.

The Philip Tuberculosis Dispensary at Nicosia continues to develop and extend its work under the immediate control of Dr. T. K. Evangelides, supervised by Dr. Bevan. Figures of attendances there and the work done will be found in an Appendix to this Report wherein it will be seen that the fear of this disease is rapidly being broken down and that the help thus made available is being sought by patients from all over the Island.

As a result of a meeting during the latter part of the year of the Director of Medical Services and Dr. Bardswell with the Commissioner of Limassol District and the Mayor of that Municipality, it is hoped that during 1938 a modern Dispensary will be available in that town for patients from both Limassol and Paphos Districts.

Arrangements are being made to train at the Larnaca Dispensary suitable nurses for Dispensary nursing and follow-up work in the homes.

The Cyprus Anti-Tuberculosis League continues to do good work ; its members are enthusiastic and local committees, through their activities, are controlling and defining district work to good effect. The sale of seals during 1937 amounted to £323. 15*s.* 0*p.* as against £132. 11*s.* 0*p.* collected during 1935.

The publication of the League's "*Cyprus Public Health*" which to-date deals only with educational subjects which have to do with tuberculosis control has been gradually enlarged and 5,000 copies are distributed widely each month.

Thanks to the assistance we have had from the National Association for the Prevention of Tuberculosis machinery is now rapidly being set up which will eventually bring this disease under control in Cyprus. It is really astounding to see the change in the attitude of the general public towards Tuberculosis.

CORRIGENDUM.

Page 3, *under Heading:* "MUKHTARS' CERTIFICATES," *line* 2—

£2,913. 6*s*. 2*p*. *should read* £2,511. 6*s*. 2*p*.

BUREAU OF MALARIA CONTROL.

Under the heading "Communicable Diseases" it will be seen that the incidence of Malaria during 1937 has been somewhat higher than in the two previous years. Several factors are responsible not the least of which is possibly the disorganization of the Medical and Sanitary services during the epidemic of Meningococcal Meningitis mentioned above. Dr. Stratman-Thomas, who has been in charge of the Bureau of Malaria Control and the Rockefeller Foundation activities on the Island, was recalled for duty to the New York Office during June. Dr. M. C. Balfour, however, whose Headquarters are at Athens, pays periodic visits to the Island as does Mr. J. C. Carter, Sanitary Engineer to the Foundation, whose work is now divided between Egypt and Cyprus. Full particulars of work done by the Rockefeller Foundation's Staff Members will be found in the Appendices. Their work of sub-soil drainage in the river bed near Kochati and that at Ayios Amvrosios in Kyrenia District is particularly worthy of mention. When the pipes are in place the summer flow of the river responsible for the breeding of *Anopheles superpictus* is immediately dried, breeding is prevented and the extra water thus collected is available for irrigation purposes. I sincerely trust that on a co-operative basis it will be possible eventually to extend this work to suitable rivers in many parts of the Island.

MUKHTARS' CERTIFICATES.

Revenue this year amounted to £5,729. 5*s.* 2*p.* as compared to £5,308. 9*s.* 7*p.* during 1936. Of this £2,913. 6*s.* 2*p.* was collected from holders of Mukhtars' Certificates as follows:—

	£	*s.*	*p.*
Government Hospitals and Dispensaries.			
From out-patients	1,448	11	8
From in-patients	696	8	8
Aided Hospitals.			
From in-patients	366	5	4
	£2,511	6	2

GENERAL.

The installation of bore-hole latrines in the village of Dheftera, in the Nicosia District, which was specially chosen for this work, referred to in last year's Report, was completed during the last quarter of the year by the Officers of the Rockefeller Foundation and with the exception of certain premises in which it was impossible to bore a latrine owing to the close proximity of a well, each house has its latrine. This is the only village in Cyprus of which this can be said. I sincerely trust that as time goes on more and more villages will copy Dheftera in this respect.

The Trachoma Nurses, now 18 in number, have been doing useful work in their several centres during the year and are much appreciated by the population they serve. There seems reason to believe that the mobile eye-clinic referred to as necessary in last year's Report will be available later and then with more nurses and another full-time Travelling Oculist this major public health problem should gradually be brought under control.

Dr. Allen, of the Near East Foundation which has its Headquarters near Salonika, Macedonia, Greece, has been instrumental in obtaining a grant of £3,000 from the governing body of the Carnegie Trust Fund to be utilized in Cyprus for a scheme of Rural Development which is to extend over a 3-year period and to include Agricultural, Educational and Health and Sanitary activities in two groups of villages, one in the Paphos and the other in Nicosia District. For Health and Sanitary duties, in the villages concerned, a qualified Sanitary Inspector was selected and sent for training to Macedonia where similar activities in grouped villages have long passed the experimental stage. When this officer assumes his duties in the villages his principal work will be the supervision of simple works of sanitation such as water supplies, the installation in villages of bore-hole latrines, refuse disposal, etc., together with intensive mosquito control in and about the area. Trachoma Nurses and Midwives will also do intensive work in the selected villages. This subject will be dealt with in detail in the next Annual Report and then annually as the work develops.

At least 95% of the "nurses" doing duty in Cyprus have had little or no training. Such training as they have had has been short and has been obtained in a haphazard manner. To obtain one of the few qualified nurses for a private patient or for special work with a hospital case is impossible. Medical, surgical and health work in Cyprus is progressing rapidly and the time has now come when a modern training school for nurses is essential. I am convinced that, providing classes are not too large, locally-trained nurses would find suitable positions, either with Government or local practitioners, as rapidly as they come to graduation and there is no doubt that suitable local girls with the necessary educational background will come forward in numbers as pupil, probationer nurses. Dr. G. K. Strode, European Director of the Rockefeller Foundation, was consulted on this subject and kindly agreed to allow Miss Elizabeth Crowell, Rockefeller Foundation Staff Member in charge of Europe Nursing Activities, to visit the Island, investigate conditions and advise as to the feasibility of instituting this project when funds permit.

Miss Crowell spent nearly two weeks in Cyprus early in the year and later sent a detailed memorandum on the subject. I sincerely trust that funds will be available in the near future for this School, the creation of which will do much for Medical, Health and Educational work in Cyprus.

The Director of Medical Services was made Chairman of a Committee nominated by His Excellency the Governor to enquire into and submit recommendations in regard to amenities and health improvements in the Resort Places of Cyprus. The Committee met on several occasions during the summer and early fall and finally submitted in draft form a Bill which, when enacted, will make possible continuous improvements in these centres and give priority to all Public Health projects which in the opinion of the Director of Medical Services are essential as preventive measures. The administrative Boards of these Resorts have been re-constituted and will contain representatives of the Government Departments concerned as well as the Village and Resort Authorities.

The Director of Medical Services is also Chairman of the Standing Committee on Nutrition and the Hotels Board. With regard to the former several meetings were held, interesting data is being gradually accumulated and a report in a form suitable for publication should be possible sometime towards the end of 1938. The Hotels Board does valuable work and, as a result of their constant supervision, the Hotels of Cyprus have improved tremendously.

The Laws, Orders and Regulations affecting Public Health enacted and published during the year were largely inspired through the epidemic of Meningococcal Meningitis. The principal Law was to provide for the Regulation of Trades and Industries in the interest of public health and public safety.

I. ADMINISTRATION.

(A) ESTABLISHMENT (INCLUDING VACANCIES), ACTING APPOINTMENTS AND PROMOTIONS.

The establishment of the Medical Department, Cyprus, during 1937, is given in Appendix M.

The names of the holders of the principal appointments are :—

Principal Acting Appointments.

Name	*Acting Appointment*	*From*	*To*
Dr. C. C. H. Cuff, Specialist (Surgeon)	*Director of Medical Services*	10. 6.37	26. 6.37
Dr. G. M. Gibbon, District Medical Officer	*Specialist (Surgeon)*	10. 7.37	6.10.37
Dr. H. B. A. Macfie, District Medical Officer	*Pathologist*	29. 4.37	3. 6.37
Mr. L. Ch. Haralambides, Assistant to Chemist	*Chemist*	1. 1.37	1.12.37

New Appointments.

Name	*Appointment*	*Date*
Mr. Harold Atkinson	*Chemist*	20th Nov., 1937
Dr. J. E. Shelley	*Hon. Oculist*	19th March, 1937
Miss Phyllis Binns	*Nursing Sister*	13th Aug., 1937

Promotions.

Name	*Appointment*	*Date*
Dr. M. Theodoulou	*Health Officer*	1st Jan., 1937
Dr. P. E. Demetriades	*do.*	19th Feb., 1937

Retirements, Resignations and Transfers.

Name	*Post*	*Date*
Dr. W. J. E. Phillips	*District Medical Officer*	21st Sept., 1937
Dr. D. C. Ogilvie	*do.*	13th Oct., 1937
Dr. A. H. Pemberton	*Hon. Consulting Surgeon, Kyrenia Hospital*	22nd March, 1937

Deaths.

Nil.

(B) LIST OF LAWS, ORDERS, REGULATIONS, ETC., AFFECTING PUBLIC HEALTH ENACTED DURING THE YEAR.

The following Laws, Orders and Regulations were passed during the year :—

LAWS.

No. 10 of 1937.—A Law to amend the Births and Deaths Registration Law.

No. 11 of 1937.—A Law to amend the Burials Law.

No. 29 of 1937.—A Law to amend the Public Health (Villages) Law.

No. 30 of 1937.—A Law to provide for the Regulation of Trades and Industries in the interest of Public Health and Public Safety.

REGULATIONS, ORDERS, ETC.

No. of Notice in Gazette (Suppl. No. 3)	*Subject*
39	Order in Council No. 1833, made under the Change of Titles Law, 1934.
49	Order in Council No. 1734, made under the Missionary Educational and Medical (Alien Regulation) Laws, 1922 and 1933.
85	Order in Council No. 1737, made under the Customs Law, 1936.
106	Order in Council No. 1746, made under the Missionary Educational and Medical (Alien Regulation) Laws, 1922 and 1933.
228	Order in Council No. 1763, made under the Trades and Industries (Regulation) Law, 1937.
229	Order in Council No. 1764, made under the Trades and Industries (Regulation) Law, 1937.
9	Regulation made under the Quarantine Law, 1932.
32	Regulation made by the Troödos Public Health Board under the Troödos Public Health Laws, 1930 to 1936.
38	Prohibition Order made under Regulation 41 of the Quarantine (Public Health) Regulations, 1935 and 1937.
54	Regulations made under section 6 of the Quarantine Law, 1932.
95	Regulations made under section 6 of the Quarantine Law, 1932.

New Burial Grounds were ordered for the following villages :—

No. of Notice in Gazette (Suppl. No. 3)	*Subject.*
1	Nicosia (Orthodox-Christian).
30	Kato Dheftera (Orthodox-Christian).
42	Kato Moni (Orthodox-Christian).
58	Nicosia (Roman Catholic).
59	Nicosia (Maronite Community).
65	Lefka (Orthodox-Christian).
74	Lapithos (Orthodox-Christian).
78	Karavostasi (Orthodox-Christian).
136	Gourri (Orthodox-Christian).
164	Nicosia (Moslem).
183	Kalokhorio (Larnaca) (Moslem).
193	Ayios Theodhoros (Nicosia), (Moslem).
203	Episkopi (Paphos), (Orthodox-Christian).
204	Phasli (Moslem).
205	Chakistra (Orthodox-Christian).
215	Phinikas (Moslem).
216	Galata (Orthodox-Christian).

Bye-laws, touching health matters, were made under the Municipal Corporations Laws :—

No. of Notice in Gazette (Suppl. No. 3)	*Municipality*	*No. of Notice in Gazette (Suppl. No. 3)*	*Municipality*
5	Morphou.	128	Famagusta.
40	Lapithos.	139	Kythrea.
116	Kyrenia.	227	Lefkara.

(c) FINANCIAL.

The total expenditure of the Medical Department was :—

	1934				1935				1936				1937		
	£	s.	p.		£	s.	p.		£	s.	p.		£	s.	p.
Personal Emoluments	22,097	0	1	..	22,950	0	2	..	22,835	19	5	..	24,859	19	6
Other Charges	27,557	4	0	..	29,478	9	2	..	30,719	1	0	..	35,735	19	8
Total	£49,654	4	1	..	£52,428	9	4	..	£53,555	0	5	..	£60,595	19	5

This represents 7.17% of the total expenditure of the Island during 1937, *i.e.* £845,037. 10*s*. 6*p*.

The total revenue of the Medical and Sanitary Department, as shown below, amounted to £5,729. 5*s*. 2*p*.

Revenue.	£	s.	p.
1. Sale of Medicines	790	2	3
2. Hospital Receipts	2,254	4	2
3. Other	1,484	2	6
4. Analytical and Bacteriological Fees	82	5	3
5. Registration of Diplomas	156	1	0
6. Quarantine Dues and Health Certificates	962	9	6
Total	£5,729	5	2

(d) MEDICAL STORES.

Satisfactory work continues in this important department. The position of these stores on the ground-floor of the central administrative block leaves much to be desired and therefore a comprehensive plan to increase space, provide better light and ventilation and facilitate administrative control, has been submitted to Government. The work will, I have reason to believe, be put in hand during 1938, and will result in increased efficiency with smaller effort. The position of stock at Headquarters' Medical Stores as the year ended was :—

	£	s.	p.
Value of stock on 1st January, 1937	2,625	11	1
Bought during 1937	7,305	13	0
	9,931	4	1
Value of stock on 31st December, 1937	2,718	11	1
Value of stock issued equals	£7,212	13	0

II. PUBLIC HEALTH.

(a) GENERAL REMARKS.

With the exception of Meningitis, Malaria and Typhoid Fever, general health conditions in the Island were satisfactory. Malaria not being a notifiable disease it is not possible to measure accurately the actual extent of its incidence throughout the Island. Records kept by the Government Medical Officers and institutions show that 18,273 cases of this disease were seen during the year as compared with 12,779 cases reported in 1936.

Patients seen at hospitals and rural dispensaries during the year numbered 153,715 made up of 108,889 out-patients, 6,584 in-patients, 256 at the Mental Hospital and 37,986 examined by the Honorary Dentists.

General Systemic and Communicable Diseases treated in Government Institutions.

Total Cases (*a*) & (*b*) 115,859

(*a*)—General Systemic Diseases	77,893	(*b*)—Communicable Diseases	37,966
Digestive system	21,824	Malaria	18,273
Eye	16,923	Influenza	6,857
Skin Diseases	8,910	Other Diseases	9,466
Respiratory system	8,406	Tuberculosis	790
General and Other Diseases	15,812	Gonorrhoea	1,664
Nervous system	4,701	Syphilis	916
Organs of Locomotion	1,317		

(b) DISEASES.

Communicable Diseases.

(*a*) *Insect-borne Diseases.*

Malaria.—The incidence of Malaria was higher in 1937 than that of 1936. The number of cases of this disease reported during the last three years were :—

1937 .. 18,273 1936 .. 12,779 1935 .. 17,917

The percentage of Malaria cases was 48.1% of the combined out- and in-patients suffering from communicable diseases during 1937.

The chief causes for this high incidence may be stated to be :—

(*a*) the inferiority of the supply of Paris Green received and the delay in getting a suitable quality of the same ;

(*b*) disorganization of the Medical and Sanitary services following the severe epidemic of Cerebro-Spinal Meningitis ;

(*c*) extensive breeding opportunities created between Kouklia, in the Famagusta District, and the sea near Salamis by the delay in emptying the irrigation reservoir and the resultant floods, etc., which filled depressions and river beds.

The Rockefeller Foundation staff have been carrying out experiments regarding subsoil drainage in the river bed near Kochati which promises satisfactory results though the cost of such work may be too high for practical consideration ; they have also carried out experiments on means of controlling the breeding places by a periodical flushing system and have tried temporary subsoil drainage in river beds at Ayios Amvrosios in Kyrenia District. It is regretted that no further progress could be made regarding the draining of the marshy area at Akrotiri and Syrianokhori.

GAS OIL, PARIS GREEN, QUININE ISSUED AND USED DURING THE YEAR 1937.

Year 1937	Nicosia	Larnaca	Limassol	Famagusta	Paphos	Kyrenia	Total	Approximate Amount of Quinine in kilos
	kilos	kilos	kilos	kilos	kilos	kilos	kilos	
Gas Oil	8,636	1,016	7,002	4,064	2,032	2,032	24,782	—
Paris Green ..	1,219	294	876	410	628	204	3,631	—
Quinine Sulph...	30.0	9.5	15.5	8.0	10.0	2.0	75.0	—
Tab. Quinine Sulph. Grs. II ..	10,000	1,000	2,000	4,000	—	1,000	18,000	2
Tab. Quinine Sulph. Grs. III	39,000	11,500	21,000	16,700	9,500	2,000	99,700	19
Tab. Quinine Sulph. Grs. V ..	125,750	23,550	47,750	32,250	37,450	9,250	276,000	89

DETAILED FIGURES OF PRINCIPAL ANTI-MALARIAL WORKS CARRIED OUT.

	Nicosia	*Larnaca*	*Limassol*	*Famagusta*	*Paphos*	*Kyrenia*
	—	—	—	—	—	—
River beds, drains, streams, dealt with and new drains made, in miles	200⅓ ..	264½ ..	70¾ ..	51 ..	321½ ..	84½
Wells, covered, filled, oiled and stocked with fish ..	5,920 ..	4,751 ..	2,765 ..	9,659 ..	5,134 ..	2,828
Tanks stocked with fish ..	22 ..	41 ..	27 ..	68 ..	3 ..	78
Premises inspected	72,021 ..	60,634 ..	166,654 ..	206,645 ..	79,856 ..	33,858
Number of visits to villages by Sanitary Staff	3,707 ..	1,415 ..	2,299 ..	2,463 ..	1,821 ..	994
Paris Green used in kg. ..	1,121¾ ..	237½ ..	944 ..	358 ..	571¼ ..	257½
Gas Oil used, in tons ..	8 ..	4 ..	5 ..	5 ..	4½ ..	4

(*b*) *Communicable Diseases other than at* (*a*) *and* (*c*).

Smallpox and Vaccinations.—No case of Smallpox occurred during 1937.

The table below shows the number of vaccinations performed during the year under review :—

Number of vaccinations	12,428	
Primary vaccinations		11,583
Successful	9,617	
Unsuccessful	1,502	
Not accounted for	464	
Re-vaccinations		845
Successful	263	
Unsuccessful	226	
Not accounted for	356	

Plague.—Anti-rat measures are being carried out at the principal ports. 2,250 rats were trapped by the sanitary staff, and spleen smears were examined by the Government Pathologist. All such smears were negative.

The ports of Larnaca, Famagusta, and Limassol are now equipped to carry out deratisation of ships up to 220 tons, and to issue deratisation certificates.

Pulmonary Tuberculosis.—Reference has already been made to this disease in the preface, and in Appendix J an account is given of the work of the Philip Dispensary, Nicosia, and the Athalassa Sanatorium. The number of cases of pulmonary tuberculosis reported during the year was 257, compared with 280 in 1936. The following tables give details collected from the notification cards :—

PULMONARY TUBERCULOSIS.

By Sex and Age Group.

Male	0–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	N.R.	Total	Grand Total
Nicosia	—	1	2	3	9	12	9	7	5	1	—	—	49	
Larnaca	—	—	—	2	6	2	3	1	2	—	—	—	16	
Limassol.. ..	—	—	—	2	6	4	9	2	—	—	—	—	23	
Famagusta ..	—	1	—	2	3	4	1	2	—	—	—	—	13	
Paphos	—	—	—	1	4	4	1	2	—	—	—	—	12	
Kyrenia	—	—	—	2	1	2	1	—	1	—	—	—	7	
Total ..	—	2	2	12	29	28	24	14	8	1	—	—	120	
Female														
Nicosia	—	—	4	6	16	19	11	9	5	2	—	—	72	121
Larnaca ..	—	—	—	—	1	4	1	—	—	—	—	—	6	22
Limassol ..	1	—	1	2	7	3	2	—	1	—	—	—	17	40
Famagusta ..	—	—	1	2	4	7	3	—	1	—	—	—	18	31
Paphos	—	1	1	2	1	4	2	1	—	—	—	—	12	24
Kyrenia	—	—	1	1	3	2	1	2	1	1	—	—	12	19
Total ..	1	1	8	13	32	39	20	12	8	3	—	—	137	257
Grand total ..	1	3	10	25	61	67	44	26	16	4	—	—	257	

Cases by Race.

English	*Orthodox-Christians*	*Moslems*	*Other*	*Total*
—	200	50	7	257

Cases per 10,000 *of Population per District.*

Nicosia	10.0	Paphos	5.3
Larnaca	4.7	Kyrenia	8.1
Limassol	6.6	Whole Colony	6.9
Famagusta	4.0		

It is not yet possible to estimate the true incidence of the disease from these figures, for it is known that a certain number of cases, although diagnosed as pulmonary tuberculosis, escape notification, while others are notified owing to errors in diagnosis ; Dr. Bardswell found that he was unable to confirm the diagnosis in 18 out of 224 notified cases of pulmonary tuberculosis examined. As a result of his detailed work in Larnaca District, it is hoped that it will eventually be possible to make a reliable estimate of the incidence of the disease in, at least, one district.

As long ago as 1935, and before the foundation of the Cyprus Anti-Tuberculosis League, it was suggested that there should be a Tuberculosis Dispensary in Larnaca, staffed and equipped for the diagnosis and treatment of cases of tuberculosis, including a system of home observation and relief work. Unfortunately, owing to lack of funds, it has taken some years for this scheme to materialize, but an important step was taken early in 1937, when a nurse, fully trained in hospital and public health methods, including tuberculosis work, was sent from Athens to work in Larnaca under the District Medical Officer. Owing to lack of funds for travelling, her activities were largely confined to work in Larnaca town ; but her work has demonstrated that it is possible for cases to be visited satisfactorily in their homes and that by these methods the prevalent fear of the disease may eventually be broken down. These findings are amply born out by the work of the Philip Dispensary already mentioned. Miss M. Mavridou, the Tuberculosis Nurse, in addition to all the normal duties connected with dispensary work, did much to develop the routine which was employed in connection with the detailed surveys of certain villages in the District. These surveys were first suggested by the District Medical Officer to Dr. Bardswell and were adopted from the routine work of Sleeping Sickness Surveys. Full reports of these surveys appear in Dr. Bardswell's interim report.

Following the appointment of a Tuberculosis Nurse, arrangements were made for the building of a Dispensary in the hospital compound, and, as a result of the money which had been donated by Mr. D. N. Demetriou, O.B.E., the Demetriou's Anti-Tuberculosis Dispensary was completed and ready for use in January, 1938. The Dispensary serves the town and District of Larnaca and is directed by the Tuberculosis Officer.

A Care-Committee was formed as a sub-committee of the Larnaca Branch of the Cyprus Anti-Tuberculosis League and undertook relief work in cases of tuberculosis which had been examined by the District Medical Officer and investigated by the Tuberculosis Nurse. This Committee meets regularly and works in conjunction with the Tuberculosis Officer.

Cerebro-Spinal Meningitis.—Reference has already been made to this disease in the preface and a detailed account appears in Appendix B.

DYSENTERY.

The total number of dysentery cases notified during the year 1937 was 84 as compared with 51 in 1936. Since 1930 this disease shows a steady decrease.

The following tables give details collected from the notification cards :—

By Sex and Age Group.

Male	0–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	N.R.	Total	Grand Total
Nicosia	5	—	—	—	—	2	—	1	—	2	—	—	10	
Larnaca ..	4	—	—	—	—	1	2	2	—	—	1	—	10	
Limassol.. ..	3	—	—	—	—	—	—	1	—	—	—	—	4	
Famagusta ..	4	2	—	—	—	4	—	—	—	—	—	—	10	
Paphos	—	—	—	—	1	—	1	2	—	—	—	—	4	
Kyrenia	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ..	16	2	—	—	1	7	3	6	—	2	1	—	38	
Female														
Nicosia	3	—	1	1	1	—	2	1	2	2	—	—	13	23
Larnaca	4	—	—	—	—	4	—	3	—	—	—	—	11	21
Limassol.. ..	4	—	—	—	—	1	2	—	—	—	—	—	7	11
Famagusta ..	2	2	—	—	—	2	2	—	1	—	—	—	9	19
Paphos	—	1	—	—	—	—	—	—	1	1	—	—	4	8
Kyrenia	1	—	—	—	—	—	—	1	—	—	1	—	2	2
Total ..	14	3	1	1	1	7	6	5	4	3	—	—	46	84
Grand total ..	30	5	1	1	2	14	9	11	4	5	2	—	84	

Cases by Race.

English	*Orthodox-Christians*	*Moslems*	*Other*	*Total*
—	61	20	3	84

Cases per 10,000 of Population per District.

Nicosia	1.9	Paphos	1.7
Larnaca	4.4	Kyrenia	0.8
Limassol	1.8	Whole Colony	2.2
Famagusta	2.4		

DIPHTHERIA.

Sporadic cases of Diphtheria occurred during the year and 16 cases are reported.

Cases by Sex and Age Group.

	0–	5–	10–	15–	20–	25–	35–	Over 35	Total
Male	11	—	—	—	—	—	—	—	11
Female ..	3	2	—	—	—	—	—	—	5

Cases by Race.

English	*Orthodox-Christians*	*Moslems*	*Other*	*Total*
—	9	6	1	16

TYPHOID.

There were 666 cases of Typhoid in 1937 against 667 in 1936, 548 in 1935 and 411 in 1934.

The following table shows details collected from notification cards :—

By Sex and Age Groups.

Male	0–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	N.R.	Total	Grand Total
Nicosia	21	26	24	18	13	7	3	1	1	—	1	—	115	
Larnaca	5	11	7	3	5	4	1	1	—	—	—	—	37	
Limassol	2	9	4	6	7	3	—	1	—	—	—	1	33	
Famagusta	24	16	9	2	4	2	1	1	—	—	—	1	60	
Paphos	—	2	5	8	4	4	1	2	1	1	—	—	28	
Kyrenia	6	9	6	5	2	4	—	—	—	—	—	—	32	
Total	58	73	55	42	35	24	6	6	2	1	1	2	305	
Female														
Nicosia	18	36	40	20	16	22	6	3	—	—	—	2	163	278
Larnaca	4	12	10	9	6	6	1	—	3	1	—	—	52	89
Limassol	5	6	7	7	10	2	1	2	—	—	—	—	40	73
Famagusta	14	17	2	5	5	2	2	—	—	—	—	—	47	107
Paphos	2	8	4	6	2	4	2	3	—	—	—	—	31	59
Kyrenia	4	2	9	6	3	2	1	1	—	—	—	—	28	60
Total	47	81	72	53	42	38	13	9	3	1	—	2	361	666
Grand total	105	154	127	95	77	62	19	15	5	2	1	4	666	

Cases by Race.

English	*Orthodox-Christians*	*Moslems*	*Other*	*Total*
—	556	99	11	666

Cases per 10,000 of Population per District.

Nicosia	23.1	Paphos	13.2
Larnaca	19.0	Kyrenia	25.7
Limassol	12.1	Whole Colony	17.9
Famagusta	14.0		

Paratyphoid A.—Eighteen cases have been notified from the following Districts : Nicosia 11, Larnaca 1, Limassol 1, Famagusta 5.

Paratyphoid B.—No case is recorded.

Trachoma.—3,505 cases were notified during 1937 as compared with 8,963 in 1936.

Undulant Fever.—No case reported.

(c) *Helminthic Diseases.*

Schistosomiasis.—No cases were reported nor have snails been readily found as heretofore. I am convinced that this disease has almost disappeared and it is certainly no longer a Public Health problem.

Ascaris.—320 out-patients and 2 in-patients are recorded this year, as compared with 197 out-patients in 1936.

Echinococcus Hydatid.—Hydatid disease (Echinococcus) is prevalent in the cystic form and gives rise to many serious complications.

OTHER DISEASES.

Cancer.—241 out-patients and 203 in-patients are recorded against 252 and 195 of the previous year. (For full details, see Appendix A).

Rheumatism.—The number of cases, among out-patients and in-patients has decreased from 3,072 in 1936 to 1,009 in 1937 and from 116 to 66 respectively.

Eye Diseases.—15,865 cases, mostly trachoma, have been seen during the year. The constant routine carried out by the Travelling and Honorary Oculists and previously reported upon has been well maintained and with the Trachoma Nurses carrying out continuous treatment better results are being observed. Propaganda in the form of lectures and cinema demonstrations continues.

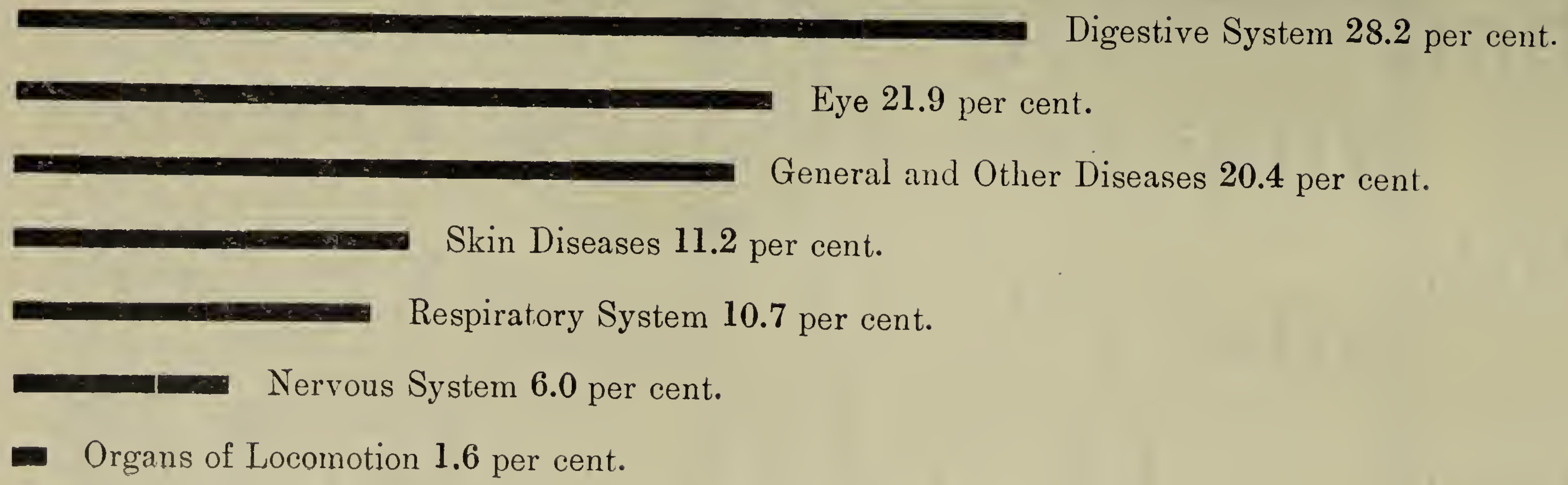
Wounds.—A considerable number of wounds caused by cutting and stabbing instruments were treated during the year. 1,630 cases were treated ; of these 64 % were males.

GENERAL SYSTEMIC AND COMMUNICABLE DISEASES TREATED IN GOVERNMENT INSTITUTIONS.

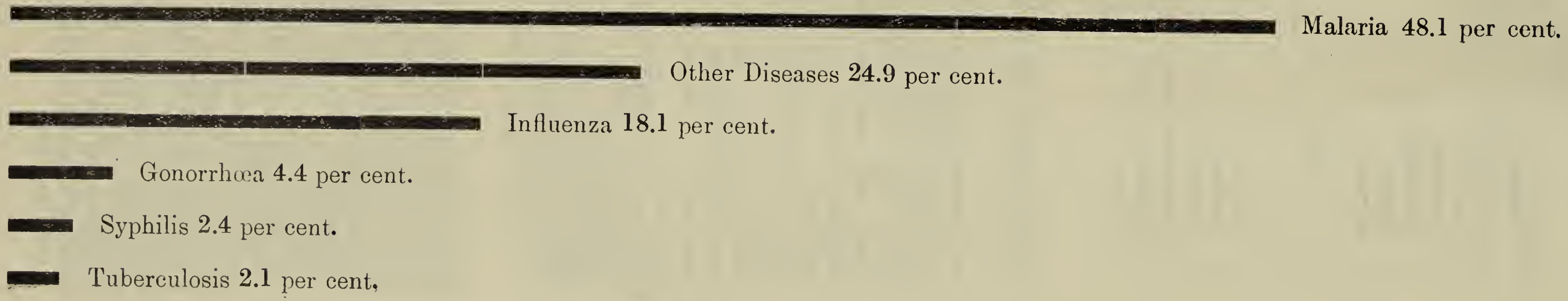
Total Cases (*a*) & (*b*) 115,859

1937.

(a)—General Systemic Diseases



(b)—Communicable Diseases



Venereal Diseases.—2,636 new cases attended for treatment during the year as against 2,720 during 1936. The prophylactic stations referred to in the last year's Report are greatly utilized by the public, 68,867 treatments having been given there during the year under review.

The Report of the Medical Officer-in-Charge of Venereal Diseases Clinics is included in the Appendices attached to this Report.

(c) VITAL STATISTICS FOR 1937.

District	*Estimated Population on* 30.6.37	*Birth Rate per* 1,000	*Death Rate per* 1,000	*Infantile Mortality Figure*
Nicosia	120,031	28.2	16.6	146.0
Larnaca	46,705	26.5	15.5	145.9
Limassol	60,004	29.9	21.2	239.1
Famagusta	76,235	31.6	12.8	117.7
Paphos	44,658	31.4	21.3	183.8
Kyrenia	23,302	30.5	17.2	137.8
Total	370,935	29.5	17.0	159.3
	FOR SIX PRINCIPAL TOWNS.			
Nicosia	26,821	20.9	16.4	55.2
Larnaca	13,170	23.3	19.2	159.6
Limassol	16,610	24.9	22.9	202.8
Famagusta	11,831	20.7	10.5	122.4
Paphos	4,764	12.8	17.6	147.5
Kyrenia	2,279	45.6	21.9	38.4
Total	75,475	22.4	17.6	122.3

TABLE SHOWING THE SICK, INVALIDING AND DEATH RATE OF EUROPEAN OFFICERS.

	1934	1935	1936	1937
Total number of officials resident	102	96	114	110
Average number resident	86.6	86.3	76	77.4
Total number on sick list	30	33	23	36
Total number of days on sick list	219	227	203	340
Average daily number on sick list	0.6	0.6	0.5	0.9
Percentage of sick to average number resident	29.4	33.3	17.4	46.5
Average number of days on sick list for each patient	7.3	6.7	8.8	9.4
Average sick time to each resident	2.0	2.6	2.6	4.3
Total number invalided	—	—	—	—
Percentage of invaliding to total residents	—	—	—	—
Total deaths	2	1	—	1
Percentage of deaths to total residents	1.9	1.0	—	0.9
Percentage of deaths to total average number resident	2.3	1.1	—	1.2
Number of cases of sickness contracted away from residence	—	—	—	—

TABLE SHOWING SICK, INVALIDING AND DEATH RATE OF CYPRIOT OFFICIALS.

	1934	1935	1936	1937
Total number of officials resident	2,025	1,847	1,836	1,836
Average number resident	2,016	1,842	1,780	1,763
Total number on sick list	1,671	1,154	1,058	1,313
Total number of days on sick list	7,671	6,814	5,642	6,245
Average daily number on sick list	19.5	18.6	15.7	17.1
Percentage of sick to average number resident	82.8	62.6	77.0	74.4
Average number of days on sick list for each patient	4.2	5.9	5.3	4.7
Average sick time to each resident	3.5	3.6	3.1	3.5
Total number invalided	21	23	20	6
Percentage of invalidings to total resident	1.0	1.2	1.1	0.3
Total deaths	5	4	12	6
Percentage of deaths of total resident	0.2	0.2	0.6	0.3
Percentage of deaths to total average number resident	0.2	0.2	0.6	0.3
Number of cases of sickness contracted away from residence	—	—	—	—

III. HYGIENE AND SANITATION.

(A) GENERAL REVIEW OF WORK DONE AND PROGRESS MADE.

(I) ADMINISTRATION.

The co-operation between the Department and the Municipal Corporations, as well as with the important Mining Companies in respect of Public Health work is very satisfactory. I include the Annual Report of Limassol as Appendix L.

The table subjoined gives the permanent staff employed on Hygiene and Sanitation.

	Health Officers	Chief Sanitary Inspector	District Sanitary Inspectors	Sanitary Inspectors, 1st Grade	Sanitary Inspectors, 2nd Grade	Quarantine Sanitary Inspectors	Govt. Midwives
Nicosia	2	—	2	5	3	—	1
Larnaca	—	—	1	—	3	1	—
Limassol	1	—	1	—	4	1	—
Famagusta	—	—	—	—	2	1	—
Paphos	—	—	1	1	2	—	—
Kyrenia	—	—	1	1	—	—	—
Colony	—	1	—	—	—	—	—
Total	3	1	6	7	14	3	1

Besides the above staff large numbers of temporary sanitary labourers are employed during the malaria season in dealing with rivers, wells and other collections of water.

(II) GENERAL MEASURES OF SANITATION.

Sewage Disposal.

The need for a proper sewage disposal system, particularly in the larger towns, is becoming more apparent every day. Certain houses are now provided with small septic tanks but there are many instances where, on account of lack of space or of the proximity of wells there is no satisfactory means of disposing of the effluents from these tanks.

Apart from domestic drainage, there are certain trades and industries which, on account of the absence of sewers, have much difficulty in getting rid of their waste water. The increasing number of absorption pits cause considerable soil pollution and are often inadequate for the removal of the amount of liquid waste. Nicosia, the capital town of the Colony, is experiencing much difficulty in this respect and I am of the opinion that the problem requires urgent consideration. Bore-hole latrines were as stated on p. 3 made for many houses in the village of Dheftera by the Rockefeller Foundation. It was not possible to provide these latrines for all the houses in the village on account of the proximity of wells which form the water supply for domestic use. It is hoped that by providing a proper piped water supply this difficulty will eventually be overcome.

(III) SCHOOL HYGIENE.

The sanitation of schools is being improved in a satisfactory manner.

The future teachers of the Colony's rural school-children will be instructed in modern health protection measures, as a result of the educational programme now under way at the newly-established Government Normal School at Morphou. The two years course includes lectures in elementary hygiene and physiology and arrangements are being made to give a series of health lectures and demonstrations. These should eventually do much to raise the standard of public health in the villages.

(IV) INDUSTRIAL HYGIENE.

I have mentioned in some detail in last year's Report that the development of mining and other industrial undertakings in the Colony is giving rise to a serious public health problem. I am glad to be able to state that the managers of all the principal mines are co-operating in a whole-hearted way with this Department, and important improvements are being made to safeguard the health and safety of their employees. The Cyprus Mines Corporation has employed 4 more trained Sanitary Inspectors making a total of 5 men who, under the able supervision of the Chief Medical Officer of that Company, are accomplishing very good work. The Tunnel Asbestos Cement Company Ltd. at Amiandos has also engaged a qualified Sanitary Inspector. Considerable improvement has been made in the housing condition of the workers in both mines.

Important legislation has recently been enacted—namely " The Trades and Industries (Regulation) Law, 1937." 32 varied trades and industries operating throughout the principal Municipalities now come under this Law. The Law gives the Public Works Department and the Medical Department power to control the health and safety of the workers and employees. It is hoped that, as a result of this Legislation, a gradual improvement in environment, sanitation, air conditions and general safety in manufacturing plants, shops and other places of employment will be possible.

(v) Housing and Town Planning.

In last year's Report some account was given of rural housing conditions and attention was drawn to the adverse effects which modern industry is likely to have on rural Cyprus. It is not anticipated that any material improvement will be forthcoming in rural areas in the near future, for it is realized that this will be achieved by education and co-operation rather than by any form of legislation.

The contribution of the leading mining firms to the solution of the housing problem in their respective areas is of considerable importance, and has already been mentioned in the preface.

Town planning, in the true sense of the term, has not yet been seriously studied in Cyprus, and activities have so far been largely confined to street widening and other improvements to existing layouts. In Larnaca, however, an attempt was made by the Commissioner to form a definite policy for the future development of the town. With the concurrence of the Building Committee, the District Medical Officer, the Local Commandant of Police and the Chief Clerk, Land Registry Office, Larnaca, it was decided to demarcate certain areas within the Municipal boundaries which should be developed as industrial, first class residential areas and building free zones. The Committee had to consider not only the natural amenities of the town, but also the various existing factories and residences throughout the areas. In spite of these difficulties it was possible to fix the boundaries of each area which would serve as a guide to the Building Committee when issuing building permits. The southern part of the Municipal area was chosen for the first class residential area, and in view of the later decision to establish an aerodrome on that side of the town, with the subsequent development of roads, it seems likely that the site will be successful. It was realized that the area was probably within the flight range of mosquitoes breeding in the vicinity of the Tekke Salt Lake, but is was considered that this should not interfere with the scheme, as it would be possible to control breeding should this ever prove necessary.

(b) MEASURES TAKEN TO SPREAD THE KNOWLEDGE OF HYGIENE AND SANITATION.

Health Exhibition.

On account of the prevailing epidemic of Cerebro-Spinal Meningitis it was considered advisable to postpone the annual Baby Show and Health Exhibition to next spring.

Public Health Lectures organized during 1937.

Also due to the emergency caused by the Meningitis epidemic, sufficient time could not be spared by the medical and sanitary staff to conduct the usual organized health lectures. No opportunity was lost however to give talks to the people in the villages when visited by any member of the staff.

Extensive health propaganda was conducted from October to December by the leading members of the Team during the Anti-Meningitis inoculaton campaign conducted in various parts of Nicosia, Paphos and Limassol Districts and in the six principal towns. It is estimated that about 50,000 people listened to these talks.

School for Sanitary Inspectors.

As stated in the last year's Annual Report, the school for Sanitary Inspectors started in November, 1936, with 25 pupils. The final examinations were held in March, 1937. The period of training at the Sanitary Inspectors' School has been increased from three to five months exclusive of the period of practical training. 19 candidates took the examination for the certificate of the Royal Sanitary Institute for Sanitary Inspectors and 11 were successful in obtaining the certificate. Amongst the successful candidates one was an official from the Palestine Public Health Services and two were Cypriot girls.

I am glad to be able to record that Municipal Authorities, Mining Corporations and Public Health Boards appreciate the need for the services of these trained officers, who are able to assist them in the discharge of the growing responsibility placed on them by the various public health enactments. This was clearly demonstrated by the fact that practically every one of the qualified Sanitary Inspectors had found employment soon after the examinations were over. Some of these were employed by the Bureau of Malarial Control and others by Municipal and Mining Corporations.

I would like to record my appreciation of the valuable work of the following persons in giving lectures and demonstrations to the class :—

Dr. C. H. Cuff, O.B.E., Specialist (Surgeon), Dr. J. C. Tull, Government Pathologist, Dr. G. M. Gibbon, District Medical Officer, Nicosia, Dr. C. S. Markides, Health Officer Nicosia–Kyrenia, Mr. R. J. Roe, Chief Veterinary Officer, Dr. H. Symeonides, Medical Officer, Dr. Tahsin, Travelling Oculist, Dr. J. Marcellos, Dental Officer, Mr. Walker, Temporary Assistant Engineer, Public Works, Mr. L. Haralambides, Assistant to Chemist, Miss Melahat, Sanitary Inspector and to Mr. M. Aziz, M.B.E., Chief Sanitary Inspector, who is responsible to me for the tutorial and field work of the class.

HOTELS.

The Hotels Board, of which the Director of Medical Services is Chairman, has made considerable progress in its efforts to raise the general standard of the hotels throughout the Colony. Although in the few leading hotels, one cannot find the amenities commonly available in the hotels of Northern Europe, nevertheless the improvement in management is so great that one can obtain good food and comfort in most hotels. The managers are keen to improve their hotels, but are often handicapped from doing so on account of the unsuitability of many of the existing buildings, the lack of space, inadequate water supplies and drainage systems and the reluctance of the actual owners of the premises to spend money on structural improvements.

HEALTH RESORTS.

(*Troödos and other Summer Resorts*).

Although the administration of the affairs of the Health resorts is managed by their respective Boards, the successful administration of Public Health matters, in these centres, depends mainly on the supervision and assistance of the Medical and Sanitary staff of this Department.

Troödos Public Health Board, the chairmanship of which for the last few years has been entrusted to the Director of Medical Services, is the only resort employing a trained Sanitary Inspector. All the others depend on the services of untrained persons. This arrangement is far from satisfactory and throws additional work on the Department's medical and sanitary staff.

The resorts attract many local and foreign visitors and thereby derive a considerable income and I consider it imperative that they should employ a properly trained staff to care for Public Health and sanitary matters.

IV. PORT HEALTH WORK AND ADMINISTRATION.

The subjoined table shows the number of visits made by the Medical Staff to vessels arriving at Cyprus Ports during 1937 :—

District	*Aeroplanes*	*Steamships*	*Sailing Ships*	*Total*
Famagusta	—	197	155	352
Karpas	—	3	—	3
Limassol	—	191	186	377
Larnaca	—	172	105	277
Karavostasi	—	103	26	129
Paphos	—	4	110	114
Kyrenia	—	3	24	27
Polis	—	1	2	3
Not ascertained	35	—	—	35

Note.—Visits of His Majesty's Navy and Aircraft have not been recorded.

V. MATERNAL, CHILD WELFARE AND SOCIAL HYGIENE.

MATERNAL WELFARE.

The training of midwives continued during the year. There is one Government Midwife in Nicosia and two Honorary Midwives stationed at Limassol and Famagusta. Dr. H. Symeonides conducted the lectures at Nicosia during January and February and the examinations were held in March, 1937. 15 pupils attended the classes and all passed the local examination.

The Government Midwives with their pupils attended to 363 confinements during the year as follows :—

Nicosia	154.	Limassol	121.	Famagusta	88.

Under the Midwifery Law of 1932, 1 midwife holding a diploma of a recognized school and 15 trained in Cyprus were registered.

Nicosia Maternity Wards.

Cases—	(1) Normal	123	
	(2) Complicated	46	
			Total 169
Deaths—	(1) of Mothers	4	
	(2) of Infants born alive	6	
	(3) Still births	34	
Sex—	Male	105	
	Female	64	
Operations—	Instrumental delivery	22	
	Hysterectomy due to ruptured uterus (on admission)	1	
	Cæsarian section	9	
Diseases and complications affecting mother—			
	Heart disease	2	
	Albuminuria	8	
	Anæmia	3	
	Lacerated Perineum	33	
	Placenta Prævia	8	
	Post Partum Hæmorrhage	12	
	Ante ,, ,,	2	
	Pneumonia	2	
Diseases and complications affecting the infant—			
	Asphyxia	10	
	Fractured Humerus	1	
	Deformed Feet	2	

CHILD WELFARE.

Child Welfare Clinics have, thanks to energetic committees, been functioning usefully in four of the six principal towns and the work of these clinics steadily increases.

VI. HOSPITALS AND DISPENSARIES.

HOSPITALS.

There are Government Hospitals in Nicosia and Limassol and State-aided Hospitals in Larnaca, Famagusta, Paphos and Kyrenia. The accommodation in these Hospitals is 312 beds and 25 cots. The total number of admissions during the year was 6,088 as compared with 5,647 during 1936.

There is still a considerable shortage of beds both in Nicosia and Limassol and as a result patients are daily refused admission. This situation is rendered the more difficult in that, owing to there being no reserve of beds, it is impossible to guarantee accommodation when a patient re-applies for admission. With the completion of the new Nicosia General Hospital next year and the continued use of a portion of the old one, it is hoped that this undesirable state of affairs will be rectified.

The question of a suitable Nurses Home is still an urgent problem, and it is hoped that this may be solved by converting the main block of the old Hospital to the purpose.

The new ambulance purchased for the Limassol Hospital has proved of great use and it is hoped to acquire one for the Larnaca District, next year.

The work carried out in the Government Hospitals has increased and its further development is only restricted by the lack of accommodation. The appreciation of the people towards these institutions is most gratifying.

The nursing problem is still a difficult one, but given suitable conditions, is capable of solution. The three Cypriot girls who were sent for a three-year course of training at the American School of Nursing, Beirut, have returned, and two have graduated with honours. They will now be appointed Sisters in the Government Hospitals. A fourth is due to complete her training next year and it is hoped to send four others during 1938. This experiment which is a new one in the Colony, will, it is hoped, prove successful and encourage others to take up this important profession.

Mental Hospital.

This institution continues to run efficiently under the skilled guidance of the Medical Superintendent, Dr. S. Lysandrides, who has effected many improvements for the inmates during his term of office.

Additional accommodation is now being provided in the shape of three new blocks (2 for male and 1 for female patients) which will still further add to the comfort of the patients. (See Medical Superintendent's Report, Appendix G.)

LEPER FARM.

The proposed scheme for kitchens and dining-rooms at the Leper Farm has had to be deferred until 1939 for financial reasons. Plans have been prepared and when completed the installation will be highly satisfactory.

The new system is not altogether popular with the inmates, who prefer a cash allowance, but unfortunately this is not always devoted to its legitimate object, and in consequence the patients do not get the properly balanced diet which is such an essential part of their treatment. It is, however, certain that once the new scheme is instituted it will meet with the approbation of most of the inmates.

Leper Farm.—Statistics for 1937.

Number of lepers in the Farm on 31st December, 1936	105	
Admitted during 1937	20	
		125
Paroled in 1937	17	
Died	4	
		21
Remaining on 31st December, 1937		104

SANATORIUM.

The work of the Athalassa Sanatorium has been described in Appendix J. by Dr. T. Evangelides, Honorary Physician to the Sanatorium.

AIDED HOSPITALS.

The four aided Hospitals at Famagusta, Larnaca, Paphos and Kyrenia continue to do good work.

There is a steady increase in the number of admissions and particularly of out-patients. The number of major operations also shows a marked rise.

Their financial position is always rather straightened, and the question of some increase in the Government subsidy may have to be considered.

During the year the new Venereal Diseases block at Larnaca has been completed and is a fine modern institution for the treatment of these conditions.

At the same hospital an up-to-date Tuberculosis Clinic has been completed for diagnostic and therapeutic purposes in connection with the work of the Cyprus Anti-Tuberculosis League and is under the supervision of the Tuberculosis Officer. This clinic was generously donated to the League by Mr. D. N. Dimitriou, O.B.E.

A very charming children's ward, the first in the Colony, was also provided from funds collected on the occasion of the Coronation.

At Kyrenia, through the generosity of Mr. D. Severis, a new operating theatre was erected together with sterilizing rooms, etc. This hospital is now well equipped for all ordinary purposes.

The Paphos Hospital has been provided with additional ward accommodation, together with a room for the Oculist and Dentist and another for the Infant Welfare Centre.

It is gratifying to note the progress that has been made in improving the aided Hospitals during the last few years and their Committees are to be congratulated on the results.

DENTAL CLINICS.

Honorary Dentists are now doing duty in all six districts and work amongst school children and holders of Mukhtars' certificates has increased very considerably. Dr. J. Marcellos has now been appointed as full-time Dental Officer.

Report by Dr. J. Marcellos is included as Appendix K.

The following are statistics for their work done during the year.

Statistics.

	Consultations	Abscesses	Extractions	Pyorrhoea	Fillings	Temporary fillings	Operations	Scaling	Diseases of the mouth	Plates	Dental prosthetic work	Total
Nicosia and Kyrenia	7,401	473	3,968	660	1,823	725	8	489	103	18	2	15,670
Larnaca ..	4,077	72	2,736	52	132	392	—	70	23	—	—	7,554
Limassol ..	2,492	8	1,007	14	100	162	—	19	5	—	—	3,807
Famagusta	2,213	15	1,520	286	70	404	—	20	83	—	—	4,611
Paphos ..	3,917	68	1,629	69	230	266	—	165	—	—	—	6,344
Total ..	20,100	636	10,860	1,081	2,355	1,949	8	763	214	18	2	37,986

EYE CLINICS.

The total work done in connection with these institutions both at the Hospitals and by the Travelling Oculists is recorded in the table of diseases.

There are three Travelling Oculists on the staff who attended the following patients during the year :—

	Limassol–Paphos	*Nicosia–Kyrenia*	*Famagusta*
New cases	4,795	3,275	4,850
Secondary treatments	4,881	5,020	7,186
Trachoma	534	639	2,892
Operations	17	111	123

The Honorary Oculists attended the following patients :—

	Larnaca	*Nicosia*	*Limassol*
New cases	2,307	1,458	1,404
Secondary treatments	6,004	1,083	5,604
Trachoma	734	383	374
Operations	163	12	16

STATEMENT OF THE AMOUNT OF WORK PERFORMED YEARLY AT THE SIX HOSPITALS FOR THE YEAR 1937.

District	In-patients	Day-cases	% Deaths to No. of in-patients	Dressings	Major operations	Maternity cases	Number of beds	Number of cots
Nicosia	2,027	31,793	8.8	29,767	973	167	103	4
Limassol	762	13,413	11.2	3,653	491	47	54	4
Larnaca	968	14,157	4.4	3,552	571	90	48	4
Famagusta	999	8,186	3.8	2,804	446	51	42	4
Paphos	688	9,345	8.4	1,406	77	10	33	7
Kyrenia	644	6,829	2.1	3,494	36	72	32	2
Mental Hospital	—	—	—	—	—	—	—	—
Sanatorium	93	—	44.0	—	—	—	53	—
Leper Farm Hospital ..	57	—	7.0	—	—	—	12	—
Total	6,238	83,723	11.21	44,676	2,594	437	333	25

DISPENSARIES.

There are 6 District Dispensaries, one attached to each hospital and 11 Rural Dispensaries scattered over the whole Island.

The following figures show the work carried out in each Dispensary :—

Place	*No. of new cases*	*No. of old cases*	*No. of dressings*	*No. of prescriptions executed*
Nicosia	39,223	56,286	29,767	86,054
Larnaca	12,748	42,045	3,552	29,913
Limassol	18,115	61,277	3,653	42,533
Famagusta	14,036	17,827	2,804	26,503
Paphos	6,928	8,323	1,406	12,405
Kyrenia	4,379	4,847	3,494	13,694
Morphou	4,182	3,112	1,153	13,647
Lefka	3,470	2,176	629	10,313
Pedhoulas	561	236	87	1,107
Klirou	2,763	1,556	805	8,553
Kophinou	3,712	3,427	261	13,654
Lysi	2,064	638	628	4,069
Agros	1,842	941	310	4,549
Perapedhi	3,103	2,123	107	7,901
Yialousa	2,214	2,124	41	8,678
Lefkoniko	3,809	2,452	218	11,650
Polis	5,037	3,947	708	16,827
Total	128,186	213,337	49,623	312,050

VII. CONTROL OF PROFESSIONAL PRACTICE.

(*a*) *Medical Council.*—The Medical Council met on four occasions during the year.

(*b*) *Medical Practitioners.*—23 Medical Practitioners were registered during the year with qualifications from the following schools: Athens 17; Adelaide 1; Leipsiae 1; Montpellier 1; Melbourne 1; Lausanne 1; Geneva 1.

(*c*) *Dental Practitioners.*—2 Dentists were registered from the University of Athens.

(*d*) *Druggists and Pharmacists.*—11 were registered: all local.

(*e*) *Control of Dangerous Drugs.*—This is not satisfactory and the laws and regulations dealing with the matter of control are being revised and strengthened.

The number of permits issued for the local transfer of dangerous drugs between authorized persons is 327.

Nine persons were prosecuted for offences in connection with Dangerous Drugs. All of whom were convicted, namely:—

(1) Illegal possession of dangerous drugs by a midwife.

Quality: One ampoule of Morphine Hydrochloride.

Penalty: £2 fine.

(2) Possession of raw opium by a labourer.

Quality: 32 pieces of raw opium weighing 27 okes.

Penalty: 6 months imprisonment.

(3) A druggist sold 10 grms. of cocaine without making an entry in the Register to that effect. He was fined £5.

(4) Six chemists were dealt with by Courts for contraventions in the giving and dispensing of dangerous drugs prescriptions. The punishment awarded ranged from caution to a £3 fine.

TABLE SHOWING THE AMOUNT OF DANGEROUS DRUGS FOR WHICH LICENCES TO IMPORT HAVE BEEN GRANTED DURING THE YEAR 1937.

Name of Drug.	*Quantity.*		
PURE DRUGS.	*No.*	*Kgs.*	*Litres*
Codeine (Methylmorphine)	—	0.95	—
Medicinal Opium	—	0.273349	—
SALTS.			
Cocaine Hydrochlor	—	0.639271	—
Codeine Phosphas	—	0.450	—
Diacetylmorphine Hydrochlor (diamorphine, heroin)	—	0.054	—
Ethylmorphine Hydrochlor (Dionine)	—	0.139	—
Morphine Hydrochlor	—	0.165	—
PREPARATIONS.			
Ampoules Eucodal 0.01	150	—	—
„ „ 0.02	150	—	—
Ampoules Hyoscine Hydrobrom cum Morphine 0.01	100	—	—
Ampoules Morphine Hydrochlor 0.01	4,222	—	—
„ „ „ 0.02	3,424	—	—
Ampoules Morphine Hydrochlor cum Atropine 0.01	70	—	—
Ampoules Morphine Hydrochlor cum Scopolamine 0.01	100	—	—
Ampoules Pantopon	394	—	—
„ Sedol	820	—	—
Comprime Citophetrine boxes × 30	35	—	—
„ „ boxes × 12	120	—	—
„ Sedol "Merck" 0.005	2,000	—	—
Extract. Cannabis Indica	—	0.066699	—
„ Cocæ Liq.	—	—	0.6
„ Fluid for Syrup Diacode	—	—	0.3
„ Opii Sic.	—	0.298349	—
„ „ Liq.	—	—	0.05

TABLE SHOWING THE AMOUNT OF DANGEROUS DRUGS FOR WHICH LICENCES TO IMPORT HAVE BEEN GRANTED DURING THE YEAR 1937—*continued.*

Name of Drug. PURE DRUGS.	*Quantity.* *No.*	 *Kgs.*	 *Litres*
Gouttes Nican bottles × 100cc.	—	—	6.6
Liq. Morphine Hydrochlor	—	—	15.113648
Pantopon (omnopon) Pulv.	—	0.028	—
Pulmo	—	—	12.4
Sirop Bromoform a la codein	—	—	8.820
,, ,, Co.	—	—	2.0
,, Cocillana Co. (Conysan)	—	—	1.710
,, Bromoform " Lug "	—	—	0.360
,, Codeine Phosphas	—	—	10.0
,, Pnoleol	—	—	4.2
,, Pulmoserum	—	—	16.0
,, Sidopulmine	—	—	2.370
,, Ephedonine " Merck "	—	—	34.0
Tabs. Codeine gr. ⅓	3,000	—	—
,, Docidide 0.005	500	—	—
,, Eucodal 0.005	500	—	—
,, Gelonida Antineuralgica	400	—	—
,, Hypo. Colic	144	—	—
,, ,, Morphin. Hydrochlor gr. ⅛	1,200	—	—
,, ,, ,, ,, gr. ¼	1,200	—	—
,, ,, ,, ,, gr. ⅓	2,400	—	—
,, ,, ,, ,, gr. ½	240	—	—
,, Pantopon 0.01	600	—	—
,, Trenpel	750	—	—
,, Veganin	536	—	—
Tinct. Cannabis Indica	—	—	0.5
,, Cocæ	—	—	3.6
,, Chloroform et Morphine Co.	—	—	2.113648
,, Opii	—	—	4.4
Tinct. Opii Crocata (Laudanum de Sydenham)	—	—	4.2

RETURN SHOWING THE COST OF DRUGS, DRESSINGS, ETC., ISSUED BY THE MEDICAL DEPARTMENT TO GOVERNMENT DEPARTMENTS, PHILANTHROPIC INSTITUTIONS (OTHER THAN ON MEDICAL PRESCRIPTION) DURING THE YEAR 1937.

Department	*Amount* £	 *s.*	 *p.*
Agricultural Department	–	1	3
Forest ,,	6	2	0
Public Works ,,	18	12	7
Police ,,	11	10	5
Prisons ,,	40	2	1
Customs ,,	1	11	5
Government Offices	7	1	4
Printing Office	–	14	8
Museum	–	4	0
Poor Houses	48	18	0
Prophylactic Stations	14	14	4
" Mana " Society	–	15	3
St. Barnabas School for the Blind	1	11	4
Infant Welfare Centres	67	13	7
Total	£219	14	6

VIII. METEOROLOGY.

METEOROLOGICAL RETURN FOR THE YEAR 1937.

Months	Temperature						Rainfall		Winds		Remarks
	Solar Maximum °F	Minimum on grass °F	Shade maximum °F	Shade Minimum °F	Range °F	Mean °F	Amount in inches	Degree of humidity %	General direction	Average force (0–10)	
January	123	21	62	29	33	45.50	5.78	77.99	SE.	2	Very cold weather
February	136	27	69	35	34	52	0.61	72.97	NW.	2	Cold weather
March	150	35	86	41	45	63.50	0.02	65.24	NW.	2	Fair weather
April	155	37	95	43	52	69	0.51	58.40	NW.	3	Fair weather
May	157	43	100	48	52	74	2.20	58.83	NW.	2	Hot weather
June	159	51	101	57	44	79	—	52.48	NW.	2	Very hot weather
July	161	56	107	65	42	86	—	57.92	NW.	2	Very hot weather
August	166	46	106	64	42	85	—	55.86	SE.	2	Very hot weather
September ..	161	54	101	61	40	81	0.02	58.68	SE.	2	Hot weather.
October	155	46	98	50	48	74	0.97	59.92	NE., E.	2	Hot weather.
November.. ..	142	42	82	45	37	63.50	2.79	72.10	NE.	3	Fair weather
December	129	32	74	37	37	55.50	0.06	71.38	SE.	2	Cold weather.
Means	149.50	40.83	90.01	47.92	42.17	69	1.08	63.48	NW.	2	

ERROL A. NEFF,
Director of Medical Services.

APPENDIX A.

REPORT OF THE SPECIALIST (SURGEON) FOR THE YEAR 1937.

By Cyril H. Cuff, O.B.E., M.B., B.S., F.R.C.S. (Ed.), *Specialist* (*Surgeon*), *Cyprus.*

Work has proceeded on the usual lines during 1937. Hospitals and Dispensaries have been kept fully occupied, and work in these institutions has been very satisfactory.

X-Ray plants are now available in all the hospitals, with the exception of Kyrenia, and Motor Ambulances at Nicosia and Limassol. This results in increased efficiency, and economy of time.

The Specialist (Surgeon) was absent on vacation leave from 10th July to 9th October, and on duty leave from 25th November to 12th December. During these periods he was replaced by the District Medical Officer, Nicosia.

General Surgery.

As may be seen from Table 1, appendicitis, hernia, eye cases, and open operations on fractures are among the most common conditions dealt with. Of the 118 cases of malignant disease, 85 % were treated with radium, as being the method of choice. The breast growths, invariably in an advanced stage, were treated by amputation, block dissection of glands and post operative radiation (15,000 to 20,000 milligramme hours).

In this connection it may be noted that, for the past five years, all cases of carcinoma of the breast have been treated on these lines and as far as can be ascertained, the results, as regards metastases and apparent cure, are as good as when the classical Halsted operation was carried out. It is hoped to collect further details as regards these cases, at an early date.

Gonococcal infection in the female pelvic organs gives rise to many serious conditions, notably pyosalpinx, tubo-ovarian abscess and pelvic peritonitis. Conservative treatment is usually desirable in these cases, or at most, a colpotomy. A major intervention, however, is often inevitable, and 30 such operations were carried out during the year.

Radium Therapy.

1937 saw the completion of seven years of Radium therapy and we are still well satisfied with the results obtained, both curative and palliative. No important change in technique has been adopted, nor is one contemplated. The five-year results of radium treatment for carcinoma of the cervix continue to remain at about 45 % apparent cures of all cases treated, and this may be considered to be quite satisfactory (*vide* Table IV). From 1930, no hysterectomies have been performed for this condition.

Follow up.—The system of follow up adopted since 1930 continues to keep us in touch with most of our cases, who regularly present themselves for examination, usually every 3 months. This adds greatly to the value of our records and enables us to accurately estimate the effects of the treatment given.

Histological Examination.—We are much indebted to the Pathological Department for reports on specimens sent for diagnosis. Only cases which are clinically doubtful are sent, the majority of cases being quite definite.

Radium in Benign Conditions.—Apart from its use in uterine haemorrhage and in the production of an artificial menopause, we have found radium of considerable value in the treatment of papillomata (warts), lupus, naevi and keloid. While these conditions are best treated with unscreened radium applicators, employing the B-rays, we have found it necessary, in the absence of these, to use γ-radiation at a distance of 2.5 cm. The results are often surprisingly good.

Tubercular adenitis of the neck occasionally responds well to external radiation.

Cancer in General.—This continues to be a serious problem and one in which it is difficult to stir up much interest, either in patients or medical men. The disease is usually well advanced when first seen, and treatment can be only palliative.

It is most important to ascertain to some extent, the mortality from cancer, in the Colony, and to this end it would be desirable to add cancer to the list of notifiable diseases. When this is done, valuable work would be initiated bearing upon the total incidence of the disease in the Island, and its relationship to sex, age, work, race and diet.

First Aid Classes.—These classes are becoming very popular and include sections for the Police, Mines, and women. The lectures and examinations are conducted locally on behalf of the Order of St. John of Jerusalem, in England. The results are very satisfactory, and the number of certificate holders both among the Police and general public cannot fail to be of value to the community.

X-Ray and Electric Department.

A considerable increase of work is noted in this Department. Patients are becoming definitely " X-Ray minded ", and this, while of advantage in some respects, often leads to a waste of time and money. The idea that, by an X-Ray examination, a diagnosis of every obscure complaint can be easily made, is prevalent, and not easily discouraged.

The main plant has been improved by the replacement of the tube and screen stands with modern units, and by the acquisition of a Potter Bucky diaphragm, " grid " screen, and four-section gastro-duodenal casette. This latter enables four pictures, *e.g.* of the pylorus, to be taken on one film and effects a considerable economy.

In the electro-therapeutic section good results are being obtained in many directions, notably in the treatment of various rheumatoid conditions with diathermy, paralyses by galvano-faradic current, and certain tubercular affections with ultra-violet light. It is hoped to acquire an infra-rouge lamp in the near future.

Training of Nurses.—This is still a problem to be faced, and in my opinion a very vital one. It is of no use for the medical staff of a hospital to devote time and trouble to the treatment of their patients, unless they can depend upon the loyal and intelligent co-operation of the nursing staff.

The difficulty of obtaining suitable candidates as probationer nurses is not confined to Cyprus, but is almost universal. There are often other more agreeable and remunerative posts to be obtained, and even to-day, there is a certain obloquy attached to the name of " Nurse ".

In order to attract the right type of girl for the skilled and responsible duties of a nurse, one must be able to offer at least three guarantees to the prospective canditate: First, a definite professional title, through a prescribed course of training, and leading, via a Government examination, to a Diploma. Second, a comfortable home, properly supervised, good food, and reasonable recreation and off duty. Thirdly, prospects of employment and promotion.

It is to be hoped, that in connection with the new hospital, some scheme for a nurses home and training school may be devised, where girls of good character and intellectual attainments will be encouraged to take up the study and practice of a noble profession, under more suitable conditions than obtain to-day.

TABLE I.—RETURN OF SURGICAL OPERATIONS OF 1937.

Operation	*Total*	*Cured*	*Relieved*	*Unrelieved*	*Died*
Abscess	208	178	24	—	6
Amputations	31	19	10	1	1
Appendicectomy	294	293	—	—	1
Benign Tumours	29	27	1	—	1
Cholocystectomy	8	3	2	2	1
Cæsarian section	13	12	—	—	1
Cystotomy	9	8	1	—	—
Curettage	106	104	—	1	1
Cystoscopy	7	2	2	3	—
Eye	223	203	20	—	—
Empyema (tapped)	—	—	—	—	—
Empyema (resection of Rib)	6	2	1	—	3
Fistula	17	13	3	1	—
Glands (excision of)	20	17	2	1	—
Gastro-Intestinal Oper.	12	7	2	1	2
Hernia	241	233	1	—	7
Hyrdocele	15	14	1	—	—
Hæmorroids	11	8	3	—	—
Hydatid cyst	13	11	1	—	1
Intestinal Operation	2	2	—	—	—
Laparatomy	68	27	18	3	20
Mastoid	16	16	—	—	—
Malignant Tumours—					
(*a*) Breast	11	2	8	—	1
(*b*) Uterus	38	37	—	—	1
(*c*) Other sites	69	2	65	—	2
Male Genital Organs	24	21	2	1	—
Miscellaneous	211	153	39	13	6
Minor Operations	350	228	116	3	3
Nephrectomy & Nephrotomy	2	1	—	—	1
Open Oper. on Fract & Joint	56	37	18	—	1
Open Oper. on Nerves	3	2	1	—	—
Osteomyelitis	9	5	4	—	—
Carried forward	2,122	1,687	345	30	60

TABLE I.—RETURN OF SURGIGAL OPERATIONS OF 1937—*continued.*

Operation	*Total*	*Cured*	*Relieved*	*Unrelieved*	*Died*
Brought forward	2,122	1,687	345	30	60
Plastic Operations	11	10	1	—	—
Sequestrectomy	5	3	2	—	—
Salpingo-oophorectomy	30	28	2	—	—
Splenectomy	1	1	—	—	—
Tonsils	13	13	—	—	—
Throat and nose	34	32	—	1	1
Tendon transplantation	3	1	2	—	—
Tracheotomy	3	—	—	—	3
Thoracotomy	2	1	1	—	—
Thyroid Operation	4	4	—	—	—
Trephining	6	6	—	—	—
Hysterectomy	13	13	—	—	—
Hysteropexy	16	16	—	—	—
Haematothorax	2	2	—	—	—
Absess of Lung	2	—	1	—	1
Total	2,267	1,817	354	31	65

TABLE II.—TABLES SHOWING PRESENT CONDITION OF PATIENTS SINCE COMMENCEMENT OF RADIUM THERAPY.

Patients treated in 1930. *Condition—December,* 1937.

	Number treated	Apparently cured	Improved	Recurrence	Died	Unknown	Not improved
Uterus	10	3	—	—	7	—	—
Head	26	11	1	—	13	1	—
Other sites	10	—	—	—	10	—	—

Patients treated in 1931. *Condition—December,* 1937.

	Number treated	Apparently cured	Improved	Recurrence	Died	Unknown	Not improved
Uterus	11	4	1	—	5	1	—
Head	20	9	1	—	9	1	—
Other sites	17	3	—	—	12	2	—

Patients treated in 1932. *Condition—December,* 1937.

	Number treated	Apparently cured	Improved	Recurrence	Died	Unknown	Not improved
Uterus	15	2	—	—	13	—	—
Head	29	17	—	1	11	—	—
Other sites	13	3	—	—	10	—	—

Patients treated in 1933. *Condition—December,* 1937.

	Number treated	Apparently cured	Improved	Recurrence	Died	Unknown	Not improved
Uterus	17	9	—	—	8	—	—
Head	31	17	1	3	9	1	—
Other sites	7	2	—	—	5	—	—

Patients treated in 1934. *Condition—December,* 1937.

	Number treated	Apparently cured	Improved	Recurrence	Died	Unknown	Not improved
Uterus	23	11	—	—	12	—	—
Head	38	25	1	2	9	1	—
Other sites	13	6	—	—	6	1	—

Patients treated in 1935. *Condition—December,* 1937.

	Number treated	Apparently cured	Improved	Recurrence	Died	Unknown	Not improved
Uterus	16	9	—	—	7	—	—
Head	24	12	3	—	9	—	—
Other sites	9	1	—	—	8	—	—

Patients treated in 1936. *Condition—December,* 1937.

	Number treated	Apparently cured	Improved	Recurrence	Died	Unknown	Not improved
Uterus	23	11	2	2	8	—	—
Head	38	28	1	2	7	—	—
Other sites	12	7	—	—	5	—	—

Patients treated in 1937. *Condition—December,* 1937.

	Number treated	Apparently cured	Improved	Recurrence	Died	Unknown	Not improved
Uterus	28	21	3	1	3	—	—
Head	22	15	6	1	—	—	—
Other sites	6	3	2	—	1	—	—

TABLE III.—GROWTHS OF THE FACE, LIPS, ETC.

Year	No. Treated	Alive at the end of								Died of Cancer by end of								Lost Sight of by end of								Survival Rates at the end of							
		1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.	8th yr.	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.	8th yr.	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.	8th yr.	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.	8th yr.
1930	26	25	22	18	17	16	16	14	12	1	4	6	8	10	10	12	13	—	—	2	1	—	—	—	1	% 96	% 85	% 69	% 65	% 62	% 62	% 54	% 46
1931	20	20	17	18	18	17	12	10	—	—	2	2	2	2	7	9	—	—	1	—	—	1	1	1	—	100	85	90	90	85	60	50	—
1932	29	29	24	24	23	19	18	—	—	—	2	4	5	10	11	—	—	—	3	1	1	—	—	—	—	100	83	83	79	67	62	—	—
1933	31	24	24	22	22	21	—	—	—	4	5	6	9	9	—	—	—	3	2	3	—	1	—	—	—	77	77	71	71	68	—	—	—
1934	38	32	32	32	28	—	—	—	—	3	5	6	9	—	—	—	—	3	1	—	1	—	—	—	—	84	84	84	74	—	—	—	—
1935	24	21	18	15	—	—	—	—	—	2	6	9	—	—	—	—	—	1	—	—	—	—	—	—	—	88	75	63	—	—	—	—	—
1936	38	33	31	—	—	—	—	—	—	5	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87	82	—	—	—	—	—	—
1937	22	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	100	—	—	—	—	—	—	—
GROWTHS OF OTHER SITES.																																	
1930	10	9	5	4	1	1	—	—	—	1	4	6	9	9	10	10	10	—	1	—	—	—	—	—	—	90	50	40	10	10	—	—	—
1931	17	15	10	8	6	5	5	3	—	2	5	7	8	10	12	12	—	—	2	2	3	2	—	2	—	88	59	47	35	29	29	18	—
1932	13	13	8	6	5	4	3	—	—	—	5	6	8	9	10	—	—	—	—	1	—	—	—	—	—	100	62	46	38	31	23	—	—
1933	7	5	5	2	2	1	—	—	—	1	1	4	5	5	—	—	—	1	1	1	—	1	—	—	—	71	71	29	29	14	—	—	—
1934	13	9	5	7	6	—	—	—	—	3	7	6	6	—	—	—	—	1	1	—	1	—	—	—	—	69	38	54	46	—	—	—	—
1935	9	8	3	1	—	—	—	—	—	1	6	8	—	—	—	—	—	—	—	—	—	—	—	—	—	89	33	11	—	—	—	—	—
1936	12	8	7	—	—	—	—	—	—	4	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	67	58	—	—	—	—	—	—
1937	6	5	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	83	—	—	—	—	—	—	—

Table IV.—Cancer of

(a) Year	(b) No. treated	(c) Alive at the end of 1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.	8th yr.	(d) Died of Cancer by end of 1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.	8th yr.
1930 : Stage I ..	3	2	3	3	3	3	3	2	2	—	—	—	—	—	—	1	1
,, II ..	2	2	2	2	2	1	1	1	1	—	—	—	—	1	1	1	1
,, III ..	3	3	1	1	—	—	—	—	—	—	2	2	3	3	3	3	3
,, IV ..	2	1	—	—	—	—	—	—	—	1	2	2	2	2	2	2	2
Total	10	8	6	6	5	4	4	3	3	1	4	4	5	6	6	7	7
1931 : Stage I ..	5	5	5	5	4	4	4	3	—	—	—	—	1	1	1	2	—
,, II ..	3	3	2	3	2	2	2	2	—	—	—	—	1	1	1	1	—
,, III ..	3	3	—	—	—	—	—	—	—	—	1	2	2	2	2	2	—
,, IV ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	11	11	7	8	6	6	6	5	—	—	1	2	4	4	4	5	—
1932 : Stage I ..	2	2	2	2	2	1	—	—	—	—	—	—	—	1	2	—	—
,, II ..	4	4	3	2	2	2	2	—	—	—	1	2	2	2	2	—	—
,, III ..	7	5	1	1	1	—	—	—	—	2	4	6	6	7	7	—	—
,, IV ..	2	2	1	—	—	—	—	—	—	—	1	2	2	2	2	—	—
Total	15	13	7	5	5	3	2	—	—	2	6	10	10	12	13	—	—
1933 : Stage I ..	3	3	3	3	3	3	—	—	—	—	—	—	—	—	—	—	—
,, II ..	10	7	6	6	4	5	—	—	—	3	4	4	5	5	—	—	—
,, III ..	3	1	1	1	1	1	—	—	—	2	2	2	2	2	—	—	—
,, IV ..	1	1	1	—	—	—	—	—	—	—	—	1	1	1	—	—	—
Total	17	12	11	10	8	9	—	—	—	5	6	7	8	8	—	—	—
1934 : Stage I ..	4	4	4	4	4	—	—	—	—	—	—	—	—	—	—	—	—
,, II ..	11	7	6	6	6	—	—	—	—	2	3	5	5	—	—	—	—
,, III ..	8	5	3	2	1	—	—	—	—	2	3	6	7	—	—	—	—
,, IV ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	23	16	13	12	11	—	—	—	—	4	6	11	12	—	—	—	—
1935 : Stage I ..	6	6	5	5	—	—	—	—	—	—	1	1	—	—	—	—	—
,, II ..	8	6	5	4	—	—	—	—	—	2	3	4	—	—	—	—	—
,, III ..	2	2	—	—	—	—	—	—	—	—	2	2	—	—	—	—	—
,, IV ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	16	14	10	9	—	—	—	—	—	2	6	7	—	—	—	—	—
1936 : Stage I ..	7	7	6	—	—	—	—	—	—	—	1	—	—	—	—	—	—
,, II ..	12	11	8	—	—	—	—	—	—	1	4	—	—	—	—	—	—
,, III ..	4	3	1	—	—	—	—	—	—	1	3	—	—	—	—	—	—
,, IV ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	23	21	15	—	—	—	—	—	—	2	8	—	—	—	—	—	—
1937 : Stage I ..	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, II ..	24	22	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—
,, III ..	2	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
,, IV ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	28	25	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—

THE UTERINE CERVIX.

(e) Lost sight of by end of								(f) Survival Rates by end of								(a) Year
1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.	8th yr.	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.	8th yr.	
								%	%	%	%	%	%	%	%	
1	—	—	—	—	—	—	—	67	100	100	100	100	100	67	67	1930 : Stage I
—	—	—	—	—	—	—	—	100	100	100	100	50	50	50	50	,, II
—	—	—	—	—	—	—	—	100	33	33	—	—	—	—	—	,, III
—	—	—	—	—	—	—	—	50	—	—	—	—	—	—	—	,, IV
1	—	—	—	—	—	—	—	80	60	60	50	40	40	30	30	Total
—	—	—	—	—	—	—	—	100	100	100	80	80	80	60	—	1931 : Stage I
—	1	—	—	—	—	—	—	100	66	100	66	66	67	67	—	,, II
—	2	1	1	1	1	1	—	100	—	—	—	—	—	—	—	,, III
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	,, IV
—	3	1	1	1	1	1	—	100	64	73	55	55	55	45	—	Total
—	—	—	—	—	—	—	—	100	100	100	100	50	—	—	—	1932 : Stage I
—	—	—	—	—	—	—	—	100	75	50	50	50	50	—	—	,, II
—	2	—	—	—	—	—	—	71	14	14	14	—	—	—	—	,, III
—	—	—	—	—	—	—	—	100	50	—	—	—	—	—	—	,, IV
—	2	—	—	—	—	—	—	87	47	33	33	20	13	—	—	Total
—	—	—	—	—	—	—	—	100	100	100	100	100	—	—	—	1933 : Stage I
—	—	—	1	—	—	—	—	70	60	60	40	50	—	—	—	,, II
—	—	—	—	—	—	—	—	33	33	33	33	33	—	—	—	,, III
—	—	—	—	—	—	—	—	100	100	—	—	—	—	—	—	,, IV
—	—	—	1	—	—	—	—	71	65	59	47	53	—	—	—	Total
—	—	—	—	—	—	—	—	100	100	100	100	—	—	—	—	1934 : Stage I
2	2	—	—	—	—	—	—	64	55	55	55	—	—	—	—	,, II
1	2	—	—	—	—	—	—	63	38	25	13	—	—	—	—	,, III
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	,, IV
3	4	—	—	—	—	—	—	70	57	52	48	—	—	—	—	Total
—	—	—	—	—	—	—	—	100	83	83	—	—	—	—	—	1935 : Stage I
—	—	—	—	—	—	—	—	75	63	50	—	—	—	—	—	,, II
—	—	—	—	—	—	—	—	100	—	—	—	—	—	—	—	,, III
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	,, IV
—	—	—	—	—	—	—	—	87	63	56	—	—	—	—	—	Total
—	—	—	—	—	—	—	—	100	86	—	—	—	—	—	—	1936 : Stage I
—	—	—	—	—	—	—	—	92	67	—	—	—	—	—	—	,, II
—	—	—	—	—	—	—	—	75	25	—	—	—	—	—	—	,, III
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	,, IV
—	—	—	—	—	—	—	—	91	65	—	—	—	—	—	—	Total
—	—	—	—	—	—	—	—	100	—	—	—	—	—	—	—	1937 : Stage I
—	—	—	—	—	—	—	—	92	—	—	—	—	—	—	—	,, II
—	—	—	—	—	—	—	—	50	—	—	—	—	—	—	—	,, III
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	,, IV
—	—	—	—	—	—	—	—	89	—	—	—	—	—	—	—	Total

APPENDIX B.

A.—BRIEF RESUMÉ OF MENINGOCOCCAL MENINGITIS.

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EPIDEMICS GENERALLY.

History records the first outbreak of Meningococcal Meningitis in epidemic form in the year 1805, in America and Geneva.

According to Hirsch such epidemics may be divided into four periods, the first being between 1805–1815, when America, France, Italy and Switzerland were attacked. The second period, involving Europe and North America, appears to have been between 1837–1850. The third, between 1854 and 1875, occurred at first in Scandinavian countries and later in Germany, Holland and Russia, while the fourth is given as between 1876–1886. In addition to these, a fifth period is recorded between 1893–1900.

In 1890, cases suspected to have been Meningococcal Meningitis were observed in some of the Eastern Countries of England, especially at Oakley in Suffolk.

During the present century, measurable epidemics of Meningococcal Meningitis have broken out, in Germany during 1904–1905 ; in New York in 1905, with 2,775 cases and a mortality rate of 67% amongst children under 10 years of age and 15% under one year of age; in different countries of England during 1906–1907; at Edinburgh in 1907 with a mortality rate of 70% ; at Glasgow in 1907 with a mortality rate of 72% ; in Greece (Levadhia District) in 1908–1909 during the winter months. At the same time (1908–1909) an epidemic broke out in Cyprus and continued during the years 1910–1911. In England, Meningococcal Meningitis was observed again in 1914–1919, with a mortality rate of 44.4% amongst Troops and 65.6% amongst the civilian population. In 1915, the epidemic was especially troublesome in London, where due to the overcrowding of Troops, there were 712 cases with 241 deaths, giving a mortality of 34%. During this epidemic the mortality rate was 60% amongst children under fifteen years of age and 50% amongst those under one and over forty-five years of age.

In the United States of America an outbreak of Meningococcal Meningitis occurred in 1933, with 2,788 cases (*i.e.* 2.5 per 100,000 population) and 1,122 deaths, giving a mortality rate of 40.2% ; another in 1934 with 2,260 cases (*i.e.* 2.0 per 100,000 population) and 966 deaths, giving a mortality percentage of 42.7%, and another in 1935 with 5,224 cases and 2,170 deaths (mortality 41.5%).

MENINGOCOCCAL MENINGITIS IN CYPRUS.

Records dealing with outbreaks in Meningococcal Meningitis are not available for the period prior to 1878, *i.e.* before the British Occupation of Cyprus.

From 1878, to date, epidemics have been observed during five periods. For the first of these, from 1887 to 1888, there are, unfortunately, no records from which detailed figures can be quoted and it is only after very considerable effort that even such incomplete information as is now available has been collected and pieced together. Almost the only definite statement which can be made in regard to this epidemic is that its incidence was greatest in the town and district of Nicosia. It is known that in Nicosia town alone 132 cases were observed. In connection with this epidemic it has only been possible to collect the information relating to parts of the Districts of Nicosia, Famagusta and Kyrenia now set out in the following Tables A, A 1 and A 2.

Table A.—Nicosia District.

Town or Village	*Cases*	*Deaths*
Nicosia	132	59
Kaimakli	3	1
Kythrea	5	3
Ayii Omoloyitadhes	13	11
Engomi	1	1
Eylenja	1	—
Ayios Dhometios	1	1
Dheftera	1	1
Morphou	34	18
Katydhata	1	1
Potami	2	2
Evrykhou	1	—
Tymbou	5	3
Total	200	101
Mortality	52.2%	—

TABLE A. 1.—FAMAGUSTA DISTRICT.

Town or Village	*Cases*	*Deaths*
Patriki	32	15
Yialousa	39	20
Leonarisso	23	12
Varosha	22	8
Ayios Theodhoros	9	4
Korovia	8	2
Galinoporni	7	5
Koma tou Yialou	7	3
Akhna	6	1
Famagusta	5	2
Gastria	4	2
Dherinia	3	—
Tavros	3	—
Paralimni	2	1
Avgorou	2	1
Livadhia	2	—
Galatia	2	1
Ayios Amvrosios	2	1
Liopetri	1	—
Sotira	1	—
Akhyritou	1	1
Styllos	1	—
Ayios Seryios	1	—
Ayios Yeoryios	1	1
Ayios Evstathios	1	1
Vathylakkas	1	—
Total	186	81
Mortality	42.5%	—

TABLE A. 2.—KYRENIA DISTRICT.

Town or Village	*Cases*	*Deaths*
Vasilia	4	3
Kyrenia	1	1
Dhikomo	15	5
Temblos	1	1
Total	21	10
Mortality	47%	—

Average Mortality for the whole Colony : 46.8%

In view of the fact that at that time there was no legal obligation to notify infectious diseases to the authorities, it may be taken for granted that a large number of cases were not brought to notice and that as a result a considerable number of the deaths actually caused by Meningococcal Meningitis (especially fulminating cases) are not included in the mortality statistics.

TREATMENT.

The only drugs used in the treatment of the disease at that time in the Famagusta District were quinine and opium.

The late Dr. Nicolaos Dervis, of Nicosia, published in 1908 a short report of this epidemic from which the following interesting excerpts have been collected :—

" *Pathogeny of the Disease.*

" The morbific cause of the disease was formed in a limited toxic source and that it was automatically grown up in the nature favoured by the changes of the atmosphere."

"*Treatment.*

"(1) *Against the Headache.*—Cold fomentation or ice applied to the head and leeches (sanguisgue) on the mastoids."

"(2) *Against Vomiting.*—Lotion Rivier, 100 grammes; Laudanum, 30 drops.

(*One spoonful every half an hour.*)"

"(3) *Against Constipation.*—Calomel, 0.50 grammes."

"(4) *Against Nervous Disturbances.*—Hydrate Chloral, 3.0 grammes;
Bromure de potassium, 4.0 grammes;
Acqua Dist., 100.0 grammes.

(*One spoonful every hour.*)"

"*Antipyrine.*

"Unfortunately we have not been able to be supplied with this excellent and famous medicine before it was too late. We have had the opportunity of using it in some serious cases especially against the headache.

"In some cases we observed that after a dose of 2 grammes of Antipyrine daily: (1) the headache was considerably decreased (2) the temperature fell by 1 degree; (3) perspiration followed which extremely benefited the patient."

Nothing more is known of the 1887–1888 epidemic.

From 1888 until 1908, the disease did not again appear in epidemic form though sporadic cases (1 to 5) are recorded each year.

In March, 1908, an epidemic of Meningococcal Meningitis broke out in the Colony and continued until March, 1911, abating during the summer months each year.

This outbreak may be divided into four periods:—

First Period.—From March, 1908, to June, 1908, with 140 cases and 96 deaths = 73.8%.

Second Period.—From December, 1908, to May, 1909, with 1,153 cases and 600 deaths = 52.0%.

Third Period.—From December, 1909, to May, 1910, with 1,080 cases and 546 deaths = 50.5%.

Fourth Period.—From December, 1911, to March, 1911, with 84 cases. (Graph A.I.).

First Period—March to June, 1908.—The disease first appeared in Episkopi village (Limassol District) on the 12th April, 1908, and cases came to notice in Limassol town and District, Larnaca District and Famagusta District at about the same time. However, only in Limassol District did the disease appear in epidemic form, elsewhere possibly on account of the better conditions only a few sporadic cases occurred. Statistical information in regard to this outbreak is available only in respect of the Limassol and Larnaca Districts and the distribution of cases and deaths by villages in these two Districts is given in the following tables:—

TABLE B.—LIMASSOL DISTRICT.

Serial No.	*Name of Village*	*No. of Cases*	*No. of Deaths*
1.	Episkopi	30	20
2.	Limassol	29	21
3.	Erimi	21	14
4.	Anoyira	8	7
5.	Polemidhia	6	3
6.	Kapilio	5	2
7.	Trakhoni	3	2
8.	Pyrgos	3	1
9.	Parakklisha	3	3
10.	Kolossi	1	—
11.	Yermasoyia	1	1
12.	Lania	1	1
13.	Vouni	1	1
14.	Silikou	1	1
	Total	113	77

Larnaca District.

Serial No.	*Name of Village*	*No. of Cases*	*No. of Deaths*
1.	Klavdhia	9	8
2.	Kophinou	5	3
3.	Tokhni	4	2
4.	Alethriko	2	2
5.	Kalavasos	2	2
6.	Kellia	1	—
7.	Vavla	1	—
8.	Maroni	1	1
9.	Ayios Theodhoros	1	1
10.	Layia	1	1
	Total	27	20
	Grand total	140	97

According to the above tables this epidemic presents a mortality rate of 67.2% for Limassol District, 74.0% for Larnaca District and 68.5 for both Districts.

Second Period—December, 1908, *to May*, 1909.—The hot and dry summer of 1908 caused a temporary halt in the disease from June to December of that year. In December, the epidemic again appeared, in the first instance in Famagusta District and in particular, the village of Koma tou Yialou where there were 14 cases and 4 deaths. At the same time one case occurred at Varosha, one at Vathylakkas and one at Platani. During December, the disease spread over the whole of the Karpas and broke out in the villages of Trikomo and Ayios Theodhoros with particular severity. At about the same time the Larnaca District was also attacked.

Before the end of December the disease had spread throughout the Colony and continued in epidemic form until May, 1909. During this period a total of 1,153 cases occurred of which 600 proved fatal, giving a mortality percentage—from the time of the appearance of the disease in December, 1908, until its cessation in epidemic form at the end of May, 1909—of 52%.

Distribution of Cases (during the 2nd Period).—As regards distribution (by Districts, Divisions, Villages, Age Epoch, etc.), statistics have been collected only for the 2nd Period.

Morbidity by District.—Table I shows the distribution of the disease by Districts, and gives the population of each District (Census 1901) and its area in square miles. An idea can thus be formed of the comparative distribution of the population attacked.

During this period the Districts where the incidence was highest were Famagusta, with 483 cases (morbidity rate per 1,000 population = 9.9); Larnaca, with 211 cases (morbidity rate per 1,000 population = 9.7) followed by Nicosia District, with 266 cases (morbidity rate per 1,000 population = 3.7).

In the other three Districts morbidity per 1,000 population was 2.6 for Limassol, 1.8 for Paphos and 1.9 for Kyrenia.

TABLE I.—DISTRIBUTION OF C.S. MENINGITIS (CASES AND DEATHS) BY DISTRICT DURING PERIOD 1908–1909.

District	*Population*	*Area in sq. miles*	*Cases*	*Morbidity per 1,000*	*Deaths*	*Death rate per 1,000*	*Mortality per 100*
Nicosia	71,289	1,040	266	3.7	116	1.6	43.6
Larnaca	26,073	365	211	9.7	141	5.3	66.8
Limassol	39,139	542	95	2.6	60	1.5	63.1
Famagusta	48,508	817	483	9.9	229	4.7	47.4
Paphos	35,205	574	66	1.8	36	1.02	54.5
Kyrenia	16,888	246	32	1.9	18	1.07	56.2
Colony	236,922	3,584	1,153	4.9	600	2.1	52.0

Distribution by Division.—Table II shows the distribution by age group of cases in the various divisions into which the Colony was divided for the purpose of medical administration.

TABLE II.—DISTRIBUTION OF C.S. MENINGITIS BY DIVISION AND AGE GROUPS (1908–1909).

DISTRICT	NICOSIA				LARNACA		LIMASSOL			FAMAGUSTA						PAPHOS			K'NIA.	Total		Per cent.
Rural Divisions	Nicosia	Lefka	Pera	Morphou	Larnaca	Lefkara	Limassol	Kellaki	Kilani	Famagusta	Akhna	Yialousa	Vatili	Komi Kebir	Akanthou	Paphos	Amarketi	Polis	Kyrenia	By Ages	Deaths	Mortality per cent.
Under 1	1	—	—	3	1	—	—	—	—	—	—	—	1	—	—	1	—	—	—	7	7	100.0
1– 5	4	2	3	12	11	5	3	—	6	12	—	11	21	4	3	1	2	—	2	102	54	53.0
5–10	7	7	5	14	31	11	4	5	11	11	2	27	24	5	5	6	2	1	2	180	83	46.1
10–20	29	23	14	32	39	24	14	10	5	35	16	29	31	19	5	6	8	—	9	348	125	35.9
20–30	13	13	4	20	25	14	—	8	8	20	4	31	18	8	6	11	5	—	9	217	123	56.7
30–40	3	8	2	12	14	4	2	5	2	18	12	18	13	4	6	2	5	—	5	135	81	60.0
40–50	1	5	2	7	14	2	1	1	3	9	—	7	9	3	2	8	3	—	2	79	58	73.4
Over 50	3	4	1	12	9	7	—	2	5	18	—	7	7	2	—	4	1	—	3	85	69	81.1
Total by Division	61	62	31	112	144	67	24	31	40	123	34	130	124	45	27	39	26	1	32	1,153	600	52.0

This Table shows that the divisions most seriously attacked were :—

(*a*) *In the Nicosia District : Morphou Division*, with 112 cases out of a total of 266 (42.1% of the total number of cases occurring in the whole District).

(*b*) *In the Larnaca District : Larnaca Division*, with 144 cases out of 211 (68.2% of the total number of cases occurring in the whole District).

(*c*) *In the Limassol District : Kilani Division*, with 40 cases out of 95 (42.1% of the total number of cases occurring in the whole District).

(*d*) *In the Famagusta District*, although the whole District was seriously attacked, a higher rate of morbidity was observed in the Yialousa Division with 130 cases (26.8% of the total number of cases occurring in the whole District), in the Vatili Division with 124 cases (25.6% of the total number of cases occurring in the whole District) and in the Famagusta Division with 123 cases (25.5% out of the 483 cases which occurred in the whole District).

(*e*) *In the Paphos District : Paphos Division*, with 39 cases out of 66 (59% of the total number of cases occurring in the whole District).

Distribution by Villages.—Tables III, IIIA, IIIB, IIIC, IIID, and IIIE, show the prevalence of the disease in the various villages of the Colony.

(i) In Nicosia District (Table III) the more seriously attacked villages were: (*a*) Morphou, in Morphou Division, with 59 cases and 19 deaths; (*b*) Lefka, in Lefka Division, with 13 cases and 7 deaths; (*c*) Dheftera, in Klirou Division, with 13 cases and 5 deaths; and (*d*) Nicosia town, with 23 cases and 7 deaths.

(ii) In Larnaca District (Table IIIA) the more seriously attacked villages were: (*a*) In the Larnaca Division, Perivolia, with 32 cases and 22 deaths; Kiti, with 23 cases and 15 deaths; Aradhippou, with 20 cases and 13 deaths; Dhromolaxia, with 17 cases and 14 deaths; and (*b*) in the Lefkara Division, Tokhni, with 18 cases and 11 deaths.

(iii) In Limassol District (Table IIIB): (*a*) In the Limassol Division, Limassol town, with 15 cases and 9 deaths; (*b*) In the Kellaki Division, Kalavasos, with 9 cases and 7 deaths; and Asgata, with 9 cases and 7 deaths; (*c*) In the Kilani Division, Vasa, with 10 cases and 4 deaths; and Arsos, with 6 cases and 4 deaths.

(iv) In Famagusta District (Table IIIC): Many villages were seriously attacked in this District.

The following present the highest degrees of morbidity :—

(1)	Koma tou Yialou	62 cases	27 deaths	(Komi Kebir Division)
(2)	Kondea	44 ,,	25 ,,	(Vatili Division)
(3)	Varosha	36 ,,	26 ,,	(Famagusta Division)
(4)	Limnia	32 ,,	9 ,,	do.
(5)	Ayios Yeoryios	19 ,,	10 ,,	do.
(6)	Ayios Seryios	18 ,,	8 ,,	do.
(7)	Arnadhi	16 ,,	8 ,,	do.
(8)	Spathariko	13 ,,	9 ,,	do.
(9)	Yerani	17 ,,	10 ,,	(Yialousa Division)
(10)	Rizokarpaso	17 ,,	8 ,,	do.
(11)	Leonarisso	13 ,,	4 ,,	do.
(12)	Dhavlos	12 ,,	7 ,,	(Komi Kebir Division).

(v) In Paphos District (Table IIID): All cases which occurred were of a sporadic nature with the exception of those at Yeroskipos—7 cases and 4 deaths— in the Paphos Division and Kedhares, with 6 cases and no deaths in the Amarketi Division.

(vi) In Kyrenia District (Table IIIE): In this District the disease presented an epidemic form at Ayios Ermolaos only, where 14 cases occurred out of which 10 proved fatal.

Table III.—Distribution of Cerebro-Spinal Meningitis by Village in Nicosia District during the Period 1908–1909.

Village	*Division*	*Cases*	*Deaths*
Nicosia	Nicosia	23	7
Dheftera	Klirou	13	5
Ayii Omoloyitadhes	Nicosia	5	1
Kaimakli	,,	2	2
Paleokhorio	Klirou	2	2
Mammari	—	6	3
Lakatamia	Nicosia	1	—
Yeri	,,	3	2
Mia Milea	Kythrea	1	—
Potamia	Pera	1	—
Strovolos	Nicosia	2	—
Ayia Varvara	Pera	1	—
Kythrea	Kythrea	1	—
Paleometokho	Nicosia	1	1
Ayios Dhometios	,,	1	—
Yerolakkos	,,	1	1
Tseri	,,	5	1
Paliouriotissa	,,	1	—
Vounos	,,	1	1
Kato Zodhia	Morphou	1	—
Athienou	Pera	1	—
Lymbia	,,	1	—
Ayios Vasilios	Nicosia	1	1
Lythrodhonda	Pera	2	1
Psomolophou	,,	4	1
Episkopio	,,	2	—
Analionda	,,	2	2
Kalokhorio	Lefka	2	1
Ayios Ioannis	Pera	1	—
Pera	,,	3	1
Kambia	,,	1	1
Kykko Monastery	Lefka	1	1
Karavostasi	,,	1	1
Lefka	,,	13	7
Evrykhou	,,	2	1
Korakou	,,	9	2
Loutros	,,	8	6
Kambos	,,	4	4
Yerakies	,,	4	1
Ambelikou	,,	3	1
Linou	,,	1	—
Pendayia	,,	1	—
Kokkina	,,	1	—
Pyrgos	,,	2	—
Piyenia	,,	2	1
Ayios Yeoryios	,,	1	—
Tembria	,,	2	—
Mansoura	,,	1	1
Phlasou	,,	1	—
Kalopanayiotis	,,	1	—
Nikos	,,	2	1
Morphou	Morphou	59	27
Nikitas	,,	1	—
Kyra	,,	4	3
Dhenia	,,	5	2
Skilloura	Nicosia	9	5
Kapouti	Morphou	4	2
Kormakiti	Kyrenia	6	3
Asomatos	,,	3	2
Prastio	Morphou	9	5
Avlona	,,	2	1
Ayia Marina	Nicosia	4	2
Potami	Morphou	1	—
Peristerona	,,	1	1
Khrysiliou	,,	1	1
Not recorded	—	3	—

TABLE IIIA.—DISTRIBUTION OF CEREBRO-SPINAL MENINGITIS BY VILLAGE IN LARNACA DISTRICT DURING THE PERIOD 1908–1909.

Village	*Division*	*Cases*	*Deaths*
Larnaca	Larnaca	12	6
Dhromolaxia	,,	17	14
Kornos	Lefkara	1	1
Aradhippou	Larnaca	20	13
Kophinou	Lefkara	2	2
Perivolia	,,	32	22
Anaphotia	,,	4	1
Kiti	Larnaca	23	15
Stroullos	,,	4	1
Voroklini	,,	5	2
Ormidhia	,,	1	—
Psevdhas	Lefkara	5	5
Mosphiloti	,,	1	—
Livadhia	,,	6	3
Menoyia	,,	2	—
Aplanda	,,	1	1
Alaminos	,,	3	2
Kellia	Larnaca	2	2
Tokhni	Lefkara	18	11
Kalokhorio	Larnaca	1	1
Tersephanou	,,	1	1
Kalavasos	Lefkara	15	14
Psematismenos	,,	2	2
Maroni	,,	6	6
Lefkara	,,	5	5
Skarinou	,,	1	1
Ayios Theodhoros	,,	4	1
Vavla	,,	7	3
Odhou	,,	1	1
Khirokitia	,,	4	1
Ora	,,	2	2
Not recorded	—	3	2

TABLE IIIB.—DISTRIBUTION OF CEREBRO-SPINAL MENINGITIS BY VILLAGE IN LIMASSOL DISTRICT DURING THE PERIOD 1908–1909.

Village	*Division*	*Cases*	*Deaths*
Limassol	Limassol	15	12
Chiftlikoudhia	,,	2	2
Polemidhia	,,	1	1
Palodhia	,,	2	1
Yermasoyia	,,	1	—
Akrounda	,,	6	4
Kalavasos	Kellaki	9	7
Odhou	,,	1	—
Sykopetra	,,	3	2
Pyrgos	,,	1	1
Arakapas	,,	2	1
Moni	,,	2	1
Asgata	,,	9	7
Kato Platres	Kilani	1	—
Silikou	,,	2	—
Vasa	,,	10	6
Kilani	,,	8	4
Mallia	,,	3	1
Vouni	,,	1	—
Ayios Amvrosios	,,	2	2
Omodhos	,,	1	—
Arsos	,,	6	4
Potamiou	,,	1	1
Kividhes	,,	3	2
Lophos	,,	2	1
Not recorded	—	1	—

TABLE IIIC.—DISTRIBUTION OF CEREBRO-SPINAL MENINGITIS BY VILLAGE IN FAMAGUSTA DISTRICT DURING THE PERIOD 1908–1909.

Village	*Division*	*Cases*	*Deaths*
Varosha	Famagusta	36	26
Famagusta	,,	3	1
Arnadhi	,,	16	8
Ayios Yeoryios	,,	19	10
Ayios Seryios	,,	18	8
Trikomo	Komi Kebir	7	3
Spathariko	Famagusta	13	9
Limnia	,,	32	9
Koma tou Yialou	Komi Kebir	62	27
Kondea	Vatili	44	25
Lefkoniko	,,	9	4
Asha	,,	4	1
Strongylos	,,	1	1
Lysi	,,	1	1
Kouklia	Akhyritou	7	3
Yenagra	Vatili	4	1
Marathovouno	,,	1	—
Phlamoudhi	Komi Kebir	1	1
Yerani	Yialousa	17	10
Dhavlos	Komi Kebir	12	7
Ardhana	,,	3	1
Ayios Elias	,,	9	—
Akanthou	,,	4	1
Syngrasi	Akhyritou	3	1
Akhna	Akhna	5	2
Kalopsidha	,,	3	2
Makrasyka	,,	2	2
Ormidhia	,,	4	3
Paralimni	Famagusta	2	2
Akhyritou	Akhyritou	7	2
Avgorou	Akhna	1	—
Sotira	Famagusta	2	2
Dherinia	,,	3	3
Xylophagou	Akhna	1	1
Rizokarpaso	Yialousa	17	8
Galinoporni	,,	7	5
Korovia	,,	2	1
Leonarisso	,,	13	4
Melanagra	,,	1	—
Platanisso	,,	2	2
Lythrangomi	,,	2	1
Nata	,,	2	2
Gastria	Komi Kebir	1	1
Ayios Theodhoros	,,	2	1
Komi Kebir	,,	6	3
Patriki	,,	9	3
Livadhia	,,	4	—
Vokolidha	Yialousa	1	—
Ephtakomi	Komi Kebir	7	2
Galatia	,,	9	3
Not recorded	—	42	16

TABLE IIId.—DISTRIBUTION OF CEREBRO-SPINAL MENINGITIS BY VILLAGE IN PAPHOS DISTRICT DURING THE PERIOD 1908–1909.

Village	*Division*	*Cases*	*Deaths*
Anarita	Paphos	2	1
Yeroskipos	,,	6	5
Mandria	,,	1	—
Ktima	,,	7	5
Paphos	,,	2	1
Anavargos	,,	2	2
Timi	,,	1	—
Trimithousa	,,	2	2
Mesa Khorio	,,	1	—
Trakhypedhoula	Amarketi	2	1
Kouklia	Paphos	2	2
Pitargou	Amarketi	2	1
Lemba	Paphos	3	2
Tsadha	,,	2	1
Marathounda	,,	1	—
Tala	,,	1	1
Kallepia	Amarketi	2	1
Polis	Polis	1	—
Pretori	Amarketi	3	2
Arminou	,,	2	—
Kedhares	,,	6	4
Ayios Nikolaos	,,	1	—
Pendalia	,,	3	1
Amarketi	,,	5	3
Arkhimandrita	,,	1	—
Philousa	,,	1	—
Salamiou	,,	1	1
Statos	,,	1	—
Kilinia	,,	1	—
Letimbou	,,	1	1

TABLE IIIe.—DISTRIBUTION OF CEREBRO-SPINAL MENINGITIS BY VILLAGE IN KYRENIA DISTRICT DURING THE PERIOD 1908–1909.

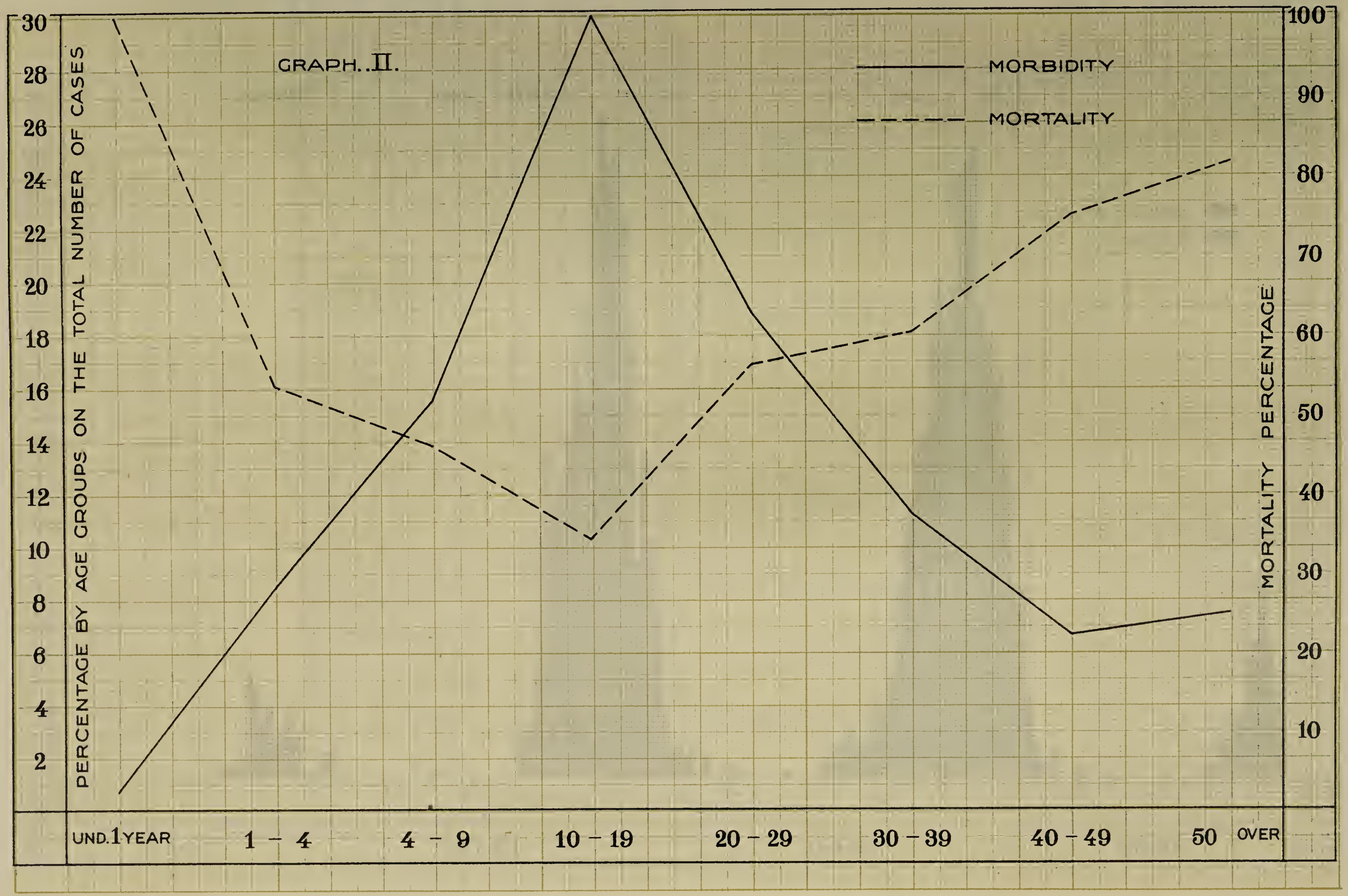
Village	*Division*	*Cases*	*Deaths*
Thermia	Kyrenia	1	—
Ayios Ermolaos	,,	14	11
Lapithos	,,	4	3
Karavas	,,	2	2
Agridhaki	,,	1	1
Larnaca tis Lapithou	,,	2	—
Sykhari	,,	1	—
Sisklipos	,,	3	1
Kato Dhikomo	,,	2	1
Klepini	,,	1	—
Orga	,,	1	—

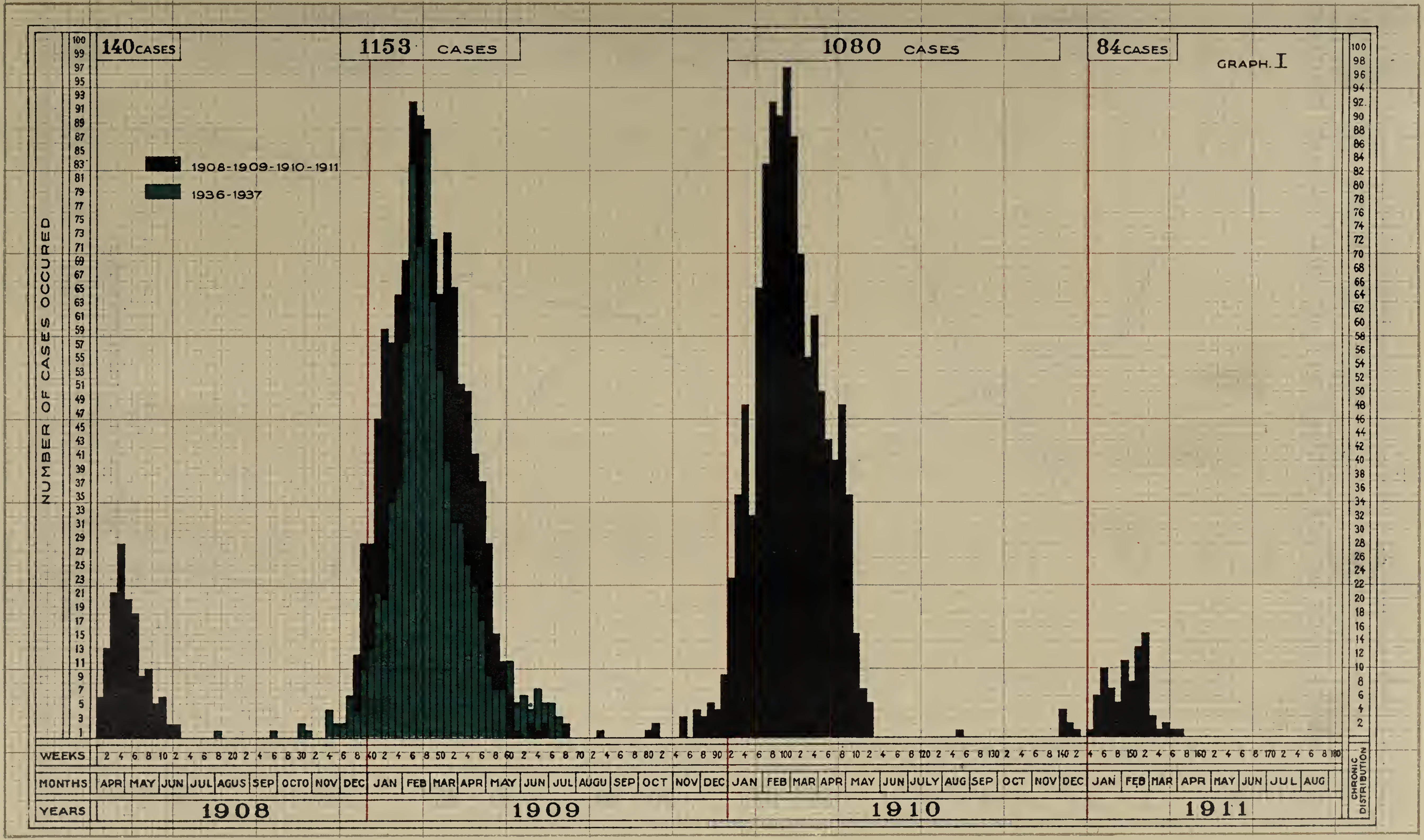
Distribution by Age Epoch.—Table II and Graph II show that amongst the age-groups the morbidity was highest in respect of persons between 10–20 years of age, this age group showing 348 cases out of 1,153 (35.9 % of the total number of cases).

In any case (as shown in Table IV and Graph II) the highest incidence appears to have been amongst young persons rather than infants and persons over 40 years of age.

TABLE IV.—DISTRIBUTION OF DEATHS FROM C. S. MENINGITIS BY DIVISION AND AGE GROUPS (1908–1909).

DISTRICT	NICOSIA				LARNACA		LIMASSOL			FAMAGUSTA						PAPHOS			K'NIA.	TOTALS		Per cent.
Rural Division	Nicosia	Lefka	Pera	Morphou	Larnaca	Lefkara	Limassol	Kellaki	Kilani	Famagusta	Akhna	Vatili	Komi Kebir	Akanthou	Yialousa	Paphos	Amarketti	Polis	Kyrenia	Deaths by ages	Total cases by ages	Mortality by age groups
Under 1	1	—	—	3	1	—	—	—	—	—	—	1	—	—	—	1	—	—	—	7	7	100.0
1–5	2	1	1	5	7	3	2	—	3	8	—	11	2	1	6	1	—	—	1	54	102	53.0
5–10	2	3	1	5	21	5	2	2	6	5	—	10	1	2	12	3	2	—	1	83	180	46.1
10–20	6	5	—	9	17	18	8	6	2	12	3	10	7	2	7	5	3	—	5	125	348	35.9
20–30	7	7	4	12	18	10	—	6	4	12	4	7	2	1	15	8	1	—	5	123	217	56.7
30–40	3	4	1	5	9	4	2	4	2	11	4	10	1	3	10	1	3	—	4	81	135	60.0
40–50	1	5	3	5	10	2	1	1	2	7	—	7	1	2	5	3	3	—	—	58	79	73.4
Over 50	1	3	1	10	9	7	—	2	5	16	—	5	1	—	5	1	1	—	2	69	85	81.1
Total by Division	23	28	11	54	92	49	15	21	24	71	11	61	15	11	60	23	13	—	18	600	1,153	52.0
Total cases by Division	61	62	31	12	144	67	24	31	40	123	34	124	45	27	130	39	26	1	32	600	1,153	52.0
Mortality by Division	37.7	45.1	35.4	48.2	63.8	73.1	62.5	67.7	60.0	57.7	32.3	49.2	33.3	40.7	46.1	58.9	50.0	—	56.2	52.0	52.0	52.0


GRAPH. II.
MORBIDITY
MORTALITY
PERCENTAGE BY AGE GROUPS ON THE TOTAL NUMBER OF CASES
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
MORTALITY PERCENTAGE
100
90
80
70
60
50
40
30
20
10
UND. 1 YEAR
1 – 4
4 – 9
10 – 19
20 – 29
30 – 39
40 – 49
50 OVER



GRAPH. I

NUMBER OF CASES OCCURED
140 CASES
1153 CASES
1080 CASES
84 CASES
1908-1909-1910-1911
1936-1937
WEEKS
MONTHS
YEARS
APR MAY JUN JUL AGUS SEP OCTO NOV DEC
JAN FEB MAR APR MAY JUN JUL AUGU SEP OCT NOV DEC
JAN FEB MAR APR MAY JUN JULY AUG SEP OCT NOV DEC
JAN FEB MAR APR MAY JUN JUL AUG
1908
1909
1910
1911
CHRONIC DISTRIBUTION

MORBIDITY AND DEATH RATE DURING THE EPIDEMIC OF MENINGOCOCCAL MENINGITIS—(1st Period 1808–1909).

Distribution of Deaths by Districts (Table IV).—Although Famagusta District presents the highest morbidity rate (9.9 per 1,000) (Table I) and, consequently, a high death rate (4.7 per 1,000) the mortality percentage observed is lower than in the other Districts—with the exception of Larnaca which presents a higher mortality percentage (66.8%) and a higher death rate 5.3 per 1,000. The lowest mortality percentage is observed in Nicosia District (43.6%) and the lowest death rate is at Paphos (1.02 per 1,000 population).

Distribution of Deaths by Division (Table IV).—The highest mortality rate was observed in the Lefkara Division (Larnaca District) where it was 73.1%, *i.e.* 49 deaths recorded in respect of 67 cases presenting while the lowest mortality rate was observed in the Akhna Division (Famagusta District) where it was 32.3%, *i.e.* 11 deaths in respect of 34 cases.

Distribution by Age Epoch (Table V).—It may be seen from Table V that the mortality was highest amongst the very young, and those over middle age (100% amongst those under one year and 81.1% over 50 years of age), whilst mortality was lowest (35.9%) in the age epoch 10–20.

Table V.—E. C. S. Meningitis—(*Period* 1908–1909).

Morbidity and Death Rate per 1,000 *of Proportional Population by Age Group.*

Age Group	*Proportional Population by Age Group*	*No. of Cases*	*Morbidity per* 1,000	*No. of Deaths*	*Mortality per* 1,000 *Population*
0– 5	31,273	109	3.4	61	1.9
5–10	29,141	180	6.2	83	2.7
10–20	47,858	348	7.0	125	2.6
20–30	56,626	217	3.7	123	2.2
30–40	27,009	135	4.9	81	2.9
40–50	20,376	79	3.3	58	2.3
Over 50	24,640	85	3.4	69	2.9
Total	236,922	1,153	4.9	600	2.1

Fulminating Cases.—Many patients died within 24 hours being victims of the fulminating type of the disease. In the Larnaca District the proportion of these fulminating cases to all cases was 25.7%.

Third Period—December, 1909, *to May*, 1910.—From May, 1909, to December, 1909, only a few sporadic cases were observed. From December, 1909, until May, 1910, the disease again presented itself in epidemic form during which period a total of 1,080 cases were recorded of which 546 proved fatal (mortality rate 50.5%).

Every endeavour was made to secure reliable statistical information relating to the third and fourth periods of the epidemic but, unfortunately, detailed statistics of these periods are not obtainable.

Fourth Period—December, 1910, *to March*, 1911.—During the period May, 1910, to December, 1910, the disease continued in a sporadic form only and then again showed a tendency to become epidemic during the winter months. From December, 1910, to March, 1911, 84 cases were recorded, the chief points of attack being Karavas, Dhavlos, Kapouti, Nicosia Town, Akaki, Morphou and Ayios Epiphanios (Soleas).

Seasonal Prevalence.—The maximum seasonal prevalence as shown in Graph A.I. was during February, in both major epidemic periods (second and third).

Treatment Used.—From the beginning of the first period (March, 1908), the Government was supplied with, and used, Antimeningococcus serum obtained from the firm of Burroughs Welcome and Co., through the Crown Agents.

References.

High Commissioner's Annual Reports (1908, 1909, 1910, 1911).

Dr. George A. Williamson, Acting Chief Medical Officer, Cyprus, *Report on the Outbreak of Cerebro-Spinal Meningitis*, December, 1908, to May, 1909.

Different Files from the Archives at the Secretariat.

Old Editions of Newspapers.

C. W. Hutt—H. Hyslop Thomson, *Principles and Practice of Preventive Medicine.*

A. Aravant Inos, *Infectious Diseases.*

J. Alivizatos, *Epidemiology.*

Annual Report of the Surgeon-General of the Public Health Service of the United States for the Fiscal Year 1936.

Census of 1901, 1911, 1921, 1931.

Dr. Nicolaos Dervis, *Epidemic of Cerebro-Spinal Meningitis in Nicosia during* 1888.

B.—OUTBREAK OF MENINGOCOCCAL MENINGITIS IN CYPRUS.

THE EPIDEMIC OF 1936–1937—(26TH JULY, 1936, TO 31ST MAY, 1937).

PREVIOUS CASES NOTIFIED IN THE COLONY.

During the ten-year period—1926–1935— but a few cases of Meningococcal Meningitis were notified as occurring in sporadic form. The following table shows the incidence of the disease during this period :—

Year	*Cases*	*Year*	*Cases*
1926	5	1931	4
1927	6	1932	2
1928	5	1933	2
1929	4	1934	1
1930	7	1935	—

DISSEMINATION OF THE DISEASE.

In the epidemic under review the disease first appeared on the 27th of July, 1936, at Kinousa village (Paphos District) in an adult male patient 46 years of age, and was notified by Dr. Fessas, a private practitioner of Polis. Although the bacteriological examination of the spinal fluid was negative for "Meningococcus," the clinical picture, the presence of "polymorphonuclear cells" in a turbid spinal fluid makes diagnosis definite in view of what followed.

The second case appeared at Patriki village, in the Famagusta District, in a male patient 22 years of age, and was notified by Dr. K. Zachariades on 17th September, 1936, as being clinically an obvious case of Meningococcal Meningitis. The patient was treated with 110 c.c. of "Antimeningococcus serum" intrathecally and 20 c.c. intramuscularly. This case presented Headache, Opisthotonos, Brudzinski, Hyperesthesia, Kernig and Vomiting. Although the case was not bacteriologically confirmed it must be considered as a case of Meningococcal Meningitis.

Both these cases recovered after an acute period of approximately one month.

By September, 1936, the infection seems to have been carried to Lefka and Mavrovouni (Cyprus Mines Corporation area) by miners from Paphos, as on 22nd September a case was observed at Mavrovouni village in a miner who had come from Paphos. Once the infection reached this area an outbreak in epidemic form was to be expected, since the housing conditions amongst the mining community, especially at Lefka, greatly favoured the dissemination of the infection. Here, although efforts have been made by the Cyprus Mines Corporation to provide their workmen with adequate and sanitary accommodation, for financial reasons, most of them preferred to live in small, damp and ill-ventilated rooms at the adjoining village of Lefka in conditions of serious overcrowding.

Immediate preventive measures were taken by the Medical Department assisted by the Medical and Sanitary Staff of the Cyprus Mines Corporation and as late as December, 1936, the outbreak did not assume grave epidemic proportions.

However, an unusually severe and protracted spell of rainy winter weather drove the population indoors for shelter against cold and wet and in conditions of overcrowding created a situation especially favourable for the further spread of the disease.

Moreover simultaneously a large scale epidemic of Influenza appeared which decreased the general resistance of that population to infection. This was probably the principal factor in the advance of the disease to epidemic proportions, especially in the Lefka Division, and in particular in the villages of Lefka, Mavrovouni and Skouriotissa.

From Lefka and Mavrovouni the infection was carried to the Limassol District by a certain labourer of Polemidhia who, on 17th November, 1936, journeyed to that District suffering acutely from the disease. It was carried to Khrysokhou (Paphos District) by two labourers who went to their village for the Bairam festival, and from Khrysokhou it was borne to Sarama.

At the same time the infection was carried from Skouriotissa to Letimbou village (Paphos District), by labourers who had been in close contact with a patient at Skouriotissa, who in turn had been notified as suffering from Meningococcal Meningitis on 23rd December, 1936, (Notification card No. 5977). All these contacts left Skouriotissa on 24th December, 1936, to pass the Christmas holidays in their village Letimbou. Five to six days after their arrival at Letimbou, six persons there were attacked.

At Mathiati the infection was, it would seem, brought by healthy carriers, labourers of the Cyprus Mines Corporation mine at Mathiati.

TABLE I.—DISTRIBUTION OF CEREBRO-SPINAL MENINGITIS CASES, BY DISTRICTS AND MONTHS—1936–1937.

District	Population	1936						1937					Total	Morbidity by District per 1,000	Morbidity per 1,000 on 1908–1909
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May			
Nicosia	118,409	—	—	1	2	1	16	84	179	77	41	14	415	3.5	3.7
Larnaca	45,977	—	—	—	—	—	—	—	5	9	3	2	19	0.4	9.7
Limassol..	59,654	—	—	—	1	6	4	13	36	54	20	10	144	2.4	2.6
Famagusta	75,464	—	—	1	—	—	—	3	4	4	—	—	12	0.16	9.9
Paphos	44,514	1	—	—	—	—	8	24	60	47	21	11	172	3.8	1.8
Kyrenia	23,198	—	—	—	—	—	—	5	15	5	2	1	28	1.2	1.9
Total	367,216	1	—	2	3	7	28	129	299	196	87	38	790	2.1	4.9
Percentage on the total		0.12	—	0.24	0.36	0.88	3.54	16.32	36.58	24.84	11.01	4.81	100	2.1	4.9

The disease was brought to Kyra by a barber who was in the habit of travelling to this village from Mavrovouni periodically, in order to practise his trade.

From Kyra the infection was transmitted to Kato Kopia and to Yerolakkos by labourers who worked at Kyra and came to Yerolakkos on 3rd February, 1937, in the same car with a woman who was attacked on the 6th February.

In conclusion, it may be pointed out that the infection was in the first place brought from Paphos to Lefka where the disease assumed epidemic form. This was due to various local factors, atmospheric and climatic conditions playing their part but the principal reason being the high degree of overcrowding existing in dwellings in a thickly-populated mining area.

SCALE OF EPIDEMIC.

During this epidemic—*i.e.* from the beginning in July, 1936, up to its cessation in an epidemic form—in all 790 cases occurred of which 270 proved fatal, giving a mortality percentage of 34.17 %, a morbidity per 1,000 of 2.2, and a death rate per 1,000 of 0.7.

MORBIDITY.

Distribution—Chronic, Table I.—The disease in the first instance appeared in July, 1936, and continued in a sporadic form to December, 1936, by which time 13 cases had been notified. From December, 1936, to March, 1937, it assumed epidemic form with the maximum prevalence in February during which month 299 cases occurred which represents 36.58 per cent. of the total number of cases. During the first week of March (28th February to 6th March) a sudden decrease is recorded, which decrease continued with certain variations during the spring and summer.

By Week.—From the Table of distribution by weeks (Table II, Graph I) it is observed that the maximum prevalence obtained during the last week of February (21st February to 27th February) when 87 cases occurred.

TABLE II.—DISTRIBUTION OF CEREBRO-SPINAL MENINGITIS CASES BY DISTRICTS AND WEEK, 1936–1937.

Months and Weeks	*Districts*						*Total by week*	*Grand Total*
	N'sia.	*L'ca.*	*L'ssol.*	*F'gusta.*	*Paphos*	*K'nia.*		
July :								
5–11	—	—	—	—	—	—	—	—
12–18	—	—	—	—	—	—	—	—
19–25	—	—	—	—	—	—	—	—
26– 1	—	—	—	—	1	—	1	—
Total by District	—	—	—	—	1	—	1	—
Grand total	—	—	—	—	1	—	1	1
August :								
2– 8	—	—	—	—	—	—	—	—
9–15	—	—	—	—	—	—	—	—
16–22	—	—	—	—	—	—	—	—
23–29	—	—	—	—	—	—	—	—
30– 5	—	—	—	—	—	—	—	—
Total by District	—	—	—	—	—	—	—	1
Grand total	—	—	—	—	1	—	—	1
September :								
6–12	—	—	—	—	—	—	—	—
13–19	—	—	—	1	—	—	1	—
20–26	1	—	—	—	—	—	1	—
27– 3	—	—	—	—	—	—	—	—
Total by District	1	—	—	1	—	—	2	2
Grand total	1	—	—	1	1	—	3	3

TABLE II.—DISTRIBUTION OF CEREBRO-SPINAL MENINGITIS CASES BY DISTRICTS AND WEEK, 1936–1937—*continued.*

Months and Weeks	*Districts*						*Total by week*	*Grand Total*
	N'sia.	*L'ca.*	*L'ssol.*	*F'gusta.*	*Paphos*	*K'nia.*		
October :								
4–10	—	—	—	—	—	—	—	—
11–17	—	—	—	—	—	—	—	—
18–24	1	—	1	—	—	—	2	—
25–31	1	—	—	—	—	—	1	—
Total by District	2	—	1	—	—	—	3	3
Grand total	3	—	1	1	1	—	6	6
November :								
1– 7	—	—	—	—	—	—	—	—
8–14	—	—	—	—	—	—	—	—
15–21	—	—	4	—	—	—	4	—
22–28	—	—	2	—	—	—	2	—
Total by District	—	—	6	—	—	—	6	6
Grand total	3	—	7	1	1	—	12	12
December :								
29– 5	2	—	—	—	—	—	2	—
6–12	1	—	2	—	3	—	6	—
13–19	2	—	1	—	1	—	4	—
20–26	10	—	—	—	—	—	10	—
27– 2	8	—	2	—	3	—	13	—
Total by District	23	—	5	—	7	—	35	35
Grand total	26	—	12	1	8	—	47	47
January, 1937 :								
3– 9	11	—	—	—	11	1	23	—
10–16	11	—	2	1	5	1	20	—
17–23	26	—	6	—	1	1	34	—
24–30	29	—	2	2	5	1	39	—
Total by District	77	—	10	3	22	4	116	116
Grand total	103	—	22	4	30	4	163	163
February :								
31– 6	28	1	9	—	17	1	56	—
7–13	53	2	6	2	16	4	83	—
14–20	42	1	7	1	12	8	71	—
21–27	53	1	11	1	18	3	87	—
Total by District	176	5	33	4	63	16	296	296
Grand total	279	5	55	8	93	20	459	459
March :								
28– 6	22	1	14	3	21	2	63	—
7–13	16	4	20	—	12	1	53	—
14–20	20	2	9	—	9	1	41	—
21–27	16	2	8	1	3	—	31	—
28– 3	13	—	12	—	5	1	31	—
Total by District	87	9	63	4	50	5	219	219
Grand total	366	14	118	12	143	25	678	678

TABLE II.—DISTRIBUTION OF CEREBRO-SPINAL MENINGITIS CASES BY DISTRICTS AND WEEK, 1936–1397—*continued.*

Months and Weeks	*Districts*						*Total by week*	*Grand Total*
	N'sia.	*L'ca.*	*L'ssol.*	*F'gusta.*	*Paphos*	*K'nia.*		
April :								
4–10	9	1	4	—	9	2	25	—
11–17	11	—	6	—	5	—	22	—
18–24	11	2	4	—	1	—	18	—
25– 1	4	—	2	—	3	—	9	—
Total by District	35	3	16	—	18	2	74	74
Grand total	401	17	134	12	161	27	752	752
May :								
2– 8	3	—	2	—	2	—	7	—
9–15	4	—	2	—	3	—	9	—
16–22	3	—	4	—	3	1	11	—
23–29	3	—	—	—	2	—	5	—
30– 5	1	2	2	—	1	—	6	—
Total by District	14	2	10	—	11	1	38	38
Grand total	415	19	144	12	172	28	790	790

TOPOGRAPHICAL DISTRIBUTION.

(*a*) *By District.*—Table III and Graph II show the distribution of cases by District and the population of each District estimated on the basis of Census 1921–1931. The area by square miles is shown in Table I, page 31.

The Districts most affected by this epidemic were: Paphos, with 172 cases (morbidity 3.8 per 1,000 of population); Nicosia District, with 415 cases (morbidity 3.5 per 1,000); and Limassol District, with 144 cases (morbidity 2.4 per 1,000).

As regards the other three Districts the morbidity per 1,000 was 1.2 for Kyrenia, 0.4 for Larnaca, and 0.16 for Famagusta.

It is interesting to note that the maximum morbidity observed during the epidemic of 1908–1909 was 9.9 per 1,000 as compared with 3.8 during the epidemic 1936–1937, showing a decrease of 6.1 per 1,000. As regards the average morbidity, it was 4.9 in 1908–1909 as compared with 2.1 per 1,000 in 1936–1937, a difference of 2.8 per 1,000.

It is also interesting that Districts most affected by the 1908–1909 epidemic had the lowest degree of incidence during the 1936–1937 outbreaks. Also Table VII shows that scarcely any cases over the age of 25 occurred in Famagusta and Larnaca Districts during 1936–1937. These Districts were the most affected during the 1908–1909 outbreaks and consequently possibly contain the largest number of immune persons aged 25 and over, *i.e.* persons who had been alive and in contact with cases or contacts at the time of the earlier epidemic.

(*b*) *By District Divisions.*—Table IV shows that from among all the Divisions (Medical Officers Headquarters) of the Colony, Lefka area (Nicosia District) showed the highest proportionate incidence with 213 cases out of the 790 occurring in the whole Colony. Five medical divisions situated in Nicosia District recorded 422 cases, Limassol division in the Limassol District had 65 cases out of 137 in the District (3 divisions) and Paphos division recorded 127 cases out of 172 in the whole District (2 divisions). It is to be noted in considering the above that the Lefka Medical Division represents the mining area.

TABLE III.—MORBIDITY AND MORTALITY OF CEREBRO-SPINAL MENINGITIS BY DISTRICTS—1936–1937.

							1908–1909		
District	*Estimated Population of* 1936	*No. of Cases*	*Morbidity per* 1,000	*No. of Deaths*	*Mortality per cent.*	*Death Rate per* 1,000	*Morbidity*	*Mortality*	*Death rate*
Nicosia	118,409	415	3.5	132	31.8	1.1	3.7	43.6	1.6
Larnaca	45,977	19	0.4	11	57.9	0.2	9.7	66.8	5.3
Limassol	59,654	144	2.4	67	46.5	1.1	2.6	63.1	1.5
Famagusta	75,464	12	0.16	3	25.6	0.03	9.9	47.4	4.7
Paphos	44,514	172	3.8	47	27.3	1.0	1.8	54.5	1.07
Kyrenia	23,198	28	1.2	10	35.7	0.4	1.9	56.2	1.02
Colony	367,216	790	2.2	270	34.17	0.7	4.9	52.0	2.1

TABLE IV.—DISTRIBUTION OF CASES AND DEATHS BY DIVISION.

District	*Division*	*Cases*	*Deaths*	*Mortality per cent.*
NICOSIA	Nicosia	74	24	32.4
	Lefka	213	76	30.9
	Morphou	106	26	24.5
	Klirou	19	6	31.5
	Pedhoulas	10	4	40.0
	Total	422	136	32.2
	Grand total	422	136	32.2
LARNACA	Larnaca	3	—	—
	Kophinou	15	10	66.6
	Total	18	10	55.5
	Grand total	440	146	33.2
LIMASSOL	Limassol	65	32	49.2
	Perapedhi	37	16	43.2
	Agros	35	17	48.5
	Total	137	65	47.4
	Grand total	577	211	36.3
FAMAGUSTA	Famagusta	7	1	14.3
	Yialousa	3	1	33.3
	Lefkoniko	1	—	—
	Lysi	2	1	50.0
	Total	13	3	23.0
	Grand total	590	214	36.0
PAPHOS	Paphos	127	30	23.6
	Polis	45	17	37.7
	Total	172	47	27.3
	Grand total	762	261	34.2
KYRENIA	Myrtou	13	3	23.0
	Kyrenia	15	6	40.0
	Total	28	9	50.0
	Grand total	790	270	34.17

(*c*) *By Principal Towns.*—Table V shows the incidence of the disease in the six principal towns. The outbreak was most severe in Limassol with 27 cases out of the total number of 50 which occurred in the six main towns, giving a morbidity of 1.64 per 1,000 of population, *i.e.* 0.97 more than the average morbidity given by the other six towns when grouped together.

Limassol is followed by Ktima (Paphos) with a morbidity of 1.27 per 1,000.

No case occurred in the Kyrenia Municipal area.

TABLE V.—DISTRIBUTION OF CASES AND DEATHS FROM CEREBRO-SPINAL MENINGITIS OCCURRING IN THE PRINCIPAL TOWNS.

							1908–1909		
Town	*Estimated Population*	*No. of Cases*	*Morbidity per 1,000*	*No. of Deaths*	*Mortality per cent.*	*Death Rate per 1,000*	*Cases*	*Deaths*	*Mortality*
Nicosia	26,312	13	0.49	2	15.3	0.07	23	7	30.4
Larnaca	12,960	2	0.15	—	—	—	12	6	50.0
Limassol	16,406	27	1.64	14	51.8	0.85	15	12	80.0
Famagusta	11,531	2	0.17	—	—	—	36	26	72.2
Paphos	4,724	6	1.27	1	16.6	0.03	7	5	71.4
Kyrenia	2,256	—	—	—	—	—	—	—	—
Total	74,189	50	0.67	17	34.0	0.24	93	56	60.2

Table VI.—Distribution of Cases and Deaths by Villages and Divisions.

Nicosia District.

Village	Division	Cases	Deaths
Strovolos	Nicosia	1	—
Mathiati	,,	4	2
Paleometokho	,,	2	1
Nicosia	,,	13	2
Kochati	,,	1	1
Omorphita	,,	3	—
Yerolakkos	,,	16	4
Ay. Dhometios	,,	8	6
Engomi	,,	2	1
Exometokhi	,,	1	—
Analionda	,,	3	1
Louroujina	,,	2	—
Lythrodhonda	,,	4	1
K. Lakatamia	,,	1	—
Pera Khorio	,,	2	1
P. Lakatamia	,,	1	1
Lymbia	,,	1	—
Khrysidha	,,	1	1
K. Dheftera	,,	2	—
Laxia	,,	3	—
Ayia	,,	1	1
Psomolophou	,,	1	1
Orta Keuy	,,	1	—
Lefka	Lefka	26	11
Mavrovouni	,,	18	9
Skouriotissa	,,	19	5
Xeros	,,	13	7
Pano Pyrgos	,,	8	5
Ambelikou	,,	9	1
Galini	,,	6	1
Loutros	,,	9	5
Katydhata	,,	3	2
Xerovounos	,,	12	6
Amadhies	,,	7	2
Ay. Nikolaos	,,	3	1
Pendayia	,,	1	1
Masari	,,	2	—
Mansoura	,,	1	—
Kokkina	,,	4	—
Vroisha	,,	1	—
Spilia	,,	3	3
Piyenia	,,	11	3
Kalokhorio	,,	5	—
Ay. Epiphanios	,,	2	2
Selemani	,,	6	5
Petra	,,	5	—
Evrykhou	,,	5	—
Chakistra	,,	3	1
Ay. Theodhoros	,,	2	—
Sina Oros	,,	1	1
Kakopetria	,,	4	—
Ay. Yeoryios	,,	1	1
Tembria	,,	7	2
Yerakies	,,	2	—
K. Pyrgos	,,	4	—
Mosphili	,,	1	1
Galata	,,	1	—
Korakou	,,	3	1
Kambos	,,	1	—
Kaliana	,,	1	—
Nikos	,,	1	—
Phlasou	,,	1	—
Elea	,,	1	—
Carried forward		287	100

Nicosia District—continued.

Village	Division	Cases	Deaths
Brought forward		287	100
Morphou	Morphou	14	4
Kyra	,,	6	2
Argaki	,,	2	1
Kato Kopia	,,	21	6
Zodhia, Kato	,,	10	2
Nikitas	,,	11	2
Syrianokhori	,,	8	1
Astromeritis	,,	7	2
Dhenia	,,	4	—
Philia	,,	6	1
Zodhia, Pano	,,	3	—
Orounda	,,	2	1
Kannavia	,,	2	—
Vizakia	,,	3	2
Avlona	,,	3	1
Potami	,,	2	—
Akaki	,,	1	1
Ay. Marina	Xyliatou	1	—
Alithinou	Klirou	1	1
Mitsero	,,	3	1
Legoudhera	,,	2	1
Platanistasa	,,	3	2
Paleokhorio	,,	4	1
Apliki	,,	3	—
Kalokhorio	,,	2	—
Kambia	,,	1	—
Pedhoulas	Pedhoulas	1	—
Kalopanayiotis	,,	2	—
Total Nicosia District		415	132

(*a*) *Larnaca District.*

Village	Division	Cases	Deaths
Old Larnaca	Larnaca	1	—
Larnaca	,,	1	—
Pyla	,,	1	1
Anaphotia	Kophinou	1	1
Pano Lefkara	,,	6	4
Kornos	,,	1	—
Tokhni	,,	3	3
Khirokitia	,,	2	1
Kalavasos	,,	1	1
Athienou	Lysi	1	—
Maroni	Larnaca	1	—
Total Larnaca District		19	11

(*b*) *Limassol District.*

Village	Division	Cases	Deaths
Limassol	Limassol	27	14
Polemidhia	,,	5	5
Parakklisha	,,	3	—
Ay. Phyla	,,	3	2
Kolossi	,,	2	1
Pissouri	,,	4	2
Kellaki	,,	1	1
Yermasoyia	,,	2	1
Moutayiaka	,,	1	—
Pyrgos	,,	1	—
Carried forward		49	26

TABLE VI.—DISTRIBUTION OF CASES AND DEATHS BY VILLAGES AND DIVISIONS—*continued.*

(*b*) *Limassol District—continued.*

Village	Division	Cases	Deaths
Brought forward		49	26
Erimi	Limassol	1	—
Zakaki	,,	1	1
Sykopetra	,,	2	—
Anoyira	,,	1	—
Chiftlikoudhia	,,	1	—
Ypsonas	,,	3	2
Alektora	,,	1	—
Apsiou	,,	3	2
Yerasa	,,	1	—
Pendakomo	,,	1	1
Korphi	,,	1	1
Ay. Mamas	Perapedhi	3	1
Trimiklini	,,	3	—
Kilani	,,	1	1
Arsos	,,	5	3
Ay. Amvrosios	,,	3	2
Pakhna	,,	2	1
Kapilio	,,	1	1
Monagri	,,	2	1
Ay. Therapon	,,	8	3
Vouni	,,	2	—
Mallia	,,	1	—
Lania	,,	2	2
Moniatis	,,	1	—
Perapedhi	,,	1	1
P. Kividhes	,,	1	1
Phini	,,	1	—
Agros	Agros	1	—
Ay. Ioannis	,,	3	1
P. Amiandos	,,	4	1
Pelendria	,,	6	3
Dhymes	,,	3	1
Kyperounda	,,	9	2
Kalokhorio	,,	1	1
Khandria	,,	2	2
K. Amiandos	,,	2	—
Kato Mylos	,,	1	—
Agridhia	,,	2	2
Ay. Theodhoros	,,	1	—
Tris Elies	Pedhoulas	5	4
Kaminaria	,,	2	—
Total Limassol District		144	67

(*c*) *Famagusta District.*

Village	Division	Cases	Deaths
Engomi	Famagusta	1	1
Famagusta	,,	2	—
Spathariko	,,	1	—
Sotira	,,	1	—
Akhna	,,	1	—
Ay. Memnon	,,	1	—
Patriki	Yialousa	1	—
Vasili	,,	1	—
Ay. Andronikos	,,	1	—
Yenagra	Lefkoniko	1	—
Vatili	Lysi	1	1
Total Famagusta District		12	3

(*d*) *Paphos District.*

Village	Division	Cases	Deaths
Letimbou	Paphos	9	5
Tsadha	,,	1	—
Kili	,,	1	—
Ay. Varvara	,,	4	1
Kallepia	,,	3	1
Anarita	,,	11	2
Timi	,,	3	1
Episkopi	,,	26	5
Emba	,,	2	—
Yeroskipos	,,	6	2
Souskiou	,,	4	1
Amarketi	,,	2	1
Khoulou	,,	2	—
Kouklia	,,	3	2
Peyia	,,	18	3
Tala	,,	1	1
Pendalia	,,	1	—
Ktima	,,	6	1
Pretori	,,	1	1
Nata	,,	3	—
Salamiou	,,	1	—
Kedhares	,,	1	1
Kelokedhara	,,	1	—
Mandria	,,	2	—
Anavargos	,,	1	—
Kilinia	,,	2	—
Phasoula	,,	1	1
Kithasi	,,	1	—
Arminou	,,	2	1
Ay. Nicolaos	,,	1	—
Vrecha	,,	1	—
Philousa	,,	1	—
Axylou	,,	2	—
Pitargou	,,	1	—
Mousere	,,	1	1
Arkhimandrita	,,	1	—
Polis	Polis	1	—
Kinousa	,,	1	—
Khrysokhou	,,	5	2
Sarama	,,	4	1
Magounda	,,	1	—
Lyso	,,	1	—
Polemi	,,	2	—
Dhrousa	,,	1	1
Ay. Dhimitrianos	,,	2	1
Inia	,,	2	—
Simou	,,	3	1
Neokhorio	,,	1	—
Pomos	,,	2	—
Goudhi	,,	2	2
Arkaka	,,	1	—
Kathikas	,,	1	—
Istinjo	,,	4	1
Yiolou	,,	1	1
Melandra	,,	2	1
Meladhia	,,	1	1
Pano Panayia	,,	1	1
Lasa	,,	1	—
Kannaviou	,,	1	—
Yialia	,,	2	1
Stroumbi	,,	1	1
Pelathousa	,,	1	1
Total Paphos District		172	47

TABLE VI.—DISTRIBUTION OF CASES AND DEATHS BY VILLAGES AND DIVISIONS—*continued.*

(*e*) *Kyrenia District.*

Village	Division	Cases	Deaths
Ay. Epiktitos	Kyrenia ..	1 ..	1
Karavas ..	,, ..	3 ..	3
Aghirda ..	,, ..	1 ..	—
Vasilia ..	,, ..	1 ..	—
Lapithos ..	,, ..	6 ..	1
Kato Dhikomo	,, ..	2 ..	—
Photta ..	,, ..	1 ..	1
Carried forward ..		15 ..	6
Brought forward ..		15 ..	6
Larnaca tis Lapithou ..	Morphou ..	3 ..	1
Myrtou ..	,, ..	7 ..	1
Dhiorios ..	,, ..	1 ..	1
Kambyli ..	,, ..	1 ..	—
Asomatos ..	,, ..	1 ..	1
Total Kyrenia District ..		28 ..	10

In all 237 villages have been affected by the epidemic:

91	in Nicosia District.
10	in Larnaca District.
51	in Limassol District.
11	in Famagusta District.
62	in Paphos District.
12	in Kyrenia District.
Total 237	in the whole Colony.

The villages in which the disease presented itself most severely in epidemic form were :—

Village	*District*	*Cases*	*Deaths*	*Mortality*
Lefka ..	.. Nicosia ..	.. 26 ..	.. 11	42.3
Skouriotissa	.. ,, ..	.. 19 ..	.. 5	26.3
Mavrovouni	.. ,, ..	.. 18 ..	.. 9	50.0
Yerolakkos	.. ,, ..	.. 16 ..	.. 4	25.0
Kato Kopia	.. ,, ..	.. 21 ..	.. 6	28.6
Xerovounos	.. ,, ..	.. 12 ..	.. 6	50.0
Kyperounda	.. Limassol ..	.. 9 ..	.. 2	22.2
Episkopi ..	.. Paphos ..	.. 26 ..	.. 5	19.2
Peyia ..	.. ,, ..	.. 18 ..	.. 3	16.6
Letimbou	.. ,, ..	.. 9 ..	.. 5	55.5

In Famagusta, Larnaca and Kyrenia Districts the disease tended to present itself in sporadic rather than epidemic form.

Distribution by Age Epoch.—Table VII shows that morbidity was highest between 5–9 years of age, giving a morbidity of 3.9 per 1,000 of the population in this group, whilst the epidemic of 1908–1909 showed its highest morbidity in the age group 10–20 where it was 7.0 per 1,000 of the population in this particular age group.

TABLE VII.—DISTRIBUTION BY AGE GROUPS AND DISTRICTS—1936–1937.

Age Groups	Proportional Population by Age Groups		Districts.						Colony	Morbidity per 1,000 of proportional population
			Nicosia	Larnaca	Limassol	Famagusta	Paphos	Kyrenia		
Under 1 ..	11.3	41,495	21	—	12	—	7	2	43	3.8
1–5 ..			68	3	19	2	18	4	114	
5– 9 ..	11.6	42,597	83	5	38	2	37	5	170	3.9
10–14 ..	10.8	39,659	68	1	15	4	35	2	125	3.1
15–19 ..	10.7	39,292	54	3	20	2	14	6	99	2.6
20–24 ..	9.2	33,784	42	4	13	2	18	1	80	2.3
25–34 ..	14.6	53,614	31	1	11	—	19	3	65	1.1
35–44 ..	11.1	40,761	19	—	10	—	9	4	42	1.1
45–54 ..	9.5	34,886	12	2	3	—	10	—	27	0.8
55–64 ..	6.4	23,502	10	—	3	—	4	1	18	0.7
Over 65 ..	4.8	17,626	4	—	—	—	1	—	5	0.3
No record ..	—	—	2	—	—	—	—	—	2	—
All ages ..	100	367,216	415	19	144	12	172	28	790	2.1

It is interesting to note that in this particular epidemic the highest morbidity was amongst children and infants.

Distribution by Sex (Table VIII).—60 per cent. of all cases were male patients with 2.6 morbidity per 1,000 of male population, whilst 40 per cent. of the cases were female with a morbidity of 1.6 per 1,000 female population. The higher incidence among the male sex may be explained by the fact that those most exposed to infection were miners and labourers who were almost entirely male.

TABLE VIII.—MORBIDITY AND MORTALITY OF CEREBRO-SPINAL MENINGITIS BY SEX—1936–1937.

Sex	*Estimated Proportional Population*	*No. of Cases*	*Morbidity per* 1,000	*Percentage on the Total*	*No. of Deaths*	*Mortality* %	*Death Rate per* 1,000	*Percentage on the Total*
—	—	—	—	—	—	—	—	—
Male ..	181,284 ..	474 ..	2.6 ..	60.0 ..	157 ..	33. 1 ..	0.8 ..	58.2
Female..	185,932 ..	316 ..	1.6 ..	40.0 ..	113 ..	35. 7 ..	0.6 ..	41.8
Total ..	367,216 ..	790 ..	2.1 ..	100.0 ..	270 ..	34.17 ..	0.7 ..	100.0

Distribution by Races (Table IX).—The epidemic was entirely confined to the two principal races of the Colony, *i.e.* Greek Orthodox-Christians and Moslems with a morbidity of 2.2 per 1,000 of proportional population. Neither the English nor any other race was attacked.

TABLE IX.—MORBIDITY AND MORTALITY OF CEREBRO-SPINAL MENINGITIS BY RACES—1936–1937.

Races	*Proportional Population*	*Morbidity*		*Mortality*		*Percentage*
		No. of Cases	*Rate per* 1,000	*Deaths*	*Per* 1,000	
—	—	—	—	—	—	—
British	710 ..	— ..	— ..	— ..	— ..	—
Greek-Orthodox ..	294,581 ..	637 ..	2.1 ..	209 ..	0.7 ..	32.6
Turkish Moslem ..	66,578 ..	152 ..	2.2 ..	61 ..	0.7 ..	40.1
Others	5,347 ..	1 ..	— ..	— ..	— ..	—
Total	367,216 ..	790 ..	2.1 ..	270 ..	0.7 ..	34.17

MORTALITY PERCENTAGE AND DEATH RATE PER 1,000.

General.

In all 270 deaths occurred out of 790 cases presenting from the beginning of the epidemic up to its cessation in epidemic form—*i.e* 31st May, 1937—giving a mortality percentage of 34.17% and a death rate of 2.1 per 1,000 population. This is low in comparison with other major epidemics (see Table X and Graph III).

Either due to the fact that they lived in distant villages or to the habits of the population who tend to conceal cases on account of fear of the isolation and quarantine restrictions which notification brings, 88 patients out of the total of 270 fatal cases, died within 24 hours of the first onset of the disease without having received treament.

Eliminating these 88 fulminating cases, the mortality falls to 23.0%.

TABLE X.—MORTALITY DURING VARIOUS EPIDEMICS OF CEREBRO-SPINAL MENINGITIS.

Country	*Year*	*Mortality*
New York	1905	67.0
Edinburgh	1907	70.0
Glasgow	1907	72.0
Levadhia (Greece)	1909	60.0
London	1915	34.0
England Troops	1919	44.4
England Civil Population	1919	65.6
United States	1933	40.2
,,	1934	42.7
,,	1935	43.3
,,	1936	43.0
,,	1937	47.2
Chicago	1931	53.3
,,	1933	37.7
Sudan	1937	66.3
Cyprus	1888	37.9
,,	1908	68.5
,,	1909	52.0
,,	1910	50.0
,,	1936–1937	34.17
United States	1928–1929	47.0
,,	1918–1919	55.0
Average Mortality		51.8%

TOPOGRAPHICAL DISTRIBUTION.

Distribution of Mortality by Districts.—Table I shows the distribution of deaths occurring by Districts.

The highest mortality rate was observed in Larnaca District reaching 57.9% followed by Limassol District with a mortality percentage of 46.5%.

The lowest mortality rate was observed in Famagusta District with 25.6% followed by Paphos with 27.3%.

The death rate is the same in each of the three districts most seriously attacked—*i.e.* Nicosia, Limassol and Paphos—being in each case 1.1 per 1,000. It may be noted from Table III and Graph IV that the maximum district death rate during the 1936–1937, epidemic was lower than the minimum district death rate during 1908–1909.

The death rate per 1,000 population for the whole Colony was 0.7 in 1936–1937, *i.e* only one-third of the death rate observed during the epidemic of 1908–1909 when it was 2.1 per 1,000.

Distribution of Mortality by Division.—From Table IV, page 45, it may be seen that the highest mortality rate was observed in the Kophinou Division in the Larnaca District where it was 66.6% and the lowest in Famagusta Division where it was 14.3%.

In the more seriously attacked Nicosia, Limassol and Paphos Districts, the highest mortality presenting was in Limassol Division, *i.e.* 49.2%.

Distribution by Village.—The Tables VI–VIE, pages 46–48, show the highest mortality observed to have been at Loutros village (Nicosia District) and Letimbou village (Paphos District) with 55.5% followed by Xeros (Nicosia District) 54.0%, Limassol town 51.4%, Mavrovouni and Xerovounos (Nicosia District) with 50.0% and Lefka (Nicosia District) with 42.3%.

Mortality by Age Groups.—As might be expected Table XI and Graph V show that the highest mortality as regards age groups was observed amongst persons over 65 years of age, with 100%, between 55–64 years with 66.6% and under one year of age with 65.1%, and the lowest between 15–19 years of age with only 20.0%.

Mortality by Sex.—Only an unimportant difference can be observed in the mortality rate of the sexes which was 33.1% for male cases and 35.7 for female. Table VIII, page 49.

Mortality by Races.—Here too but a small degree of difference is observed, the rates being 32.6% for Orthodox-Christians and 40.1% for Moslems, Table IX, page 49.

Table XI.—Mortality and Death Rate per 1,000 of Proportional Population by Age Groups.

Age Groups	Propor. %	Estimated Proportional Population	Districts						Total	Death Rate per 1,000	No. of cases	Mortality per cent.
			Nicosia	Larnaca	Limassol	Famagusta	Paphos	Kyrenia				
Under 1 ..	11.3	41,495	13	—	9	—	5	1	28	1.4	43	65.1
1– 5			22	3	9	1	4	—	39		114	34.2
5– 9	1.6	42,597	22	2	12	—	6	1	43	1.0	170	25.3
10–14	10.8	39,659	21	1	5	1	4	1	33	0.8	125	26.4
15–19	10.7	39,292	7	2	7	1	2	1	20	0.5	99	20.0
20–24	9.2	33,784	12	2	8	—	6	1	29	0.8	80	36.7
25–34	14.6	53,614	12	—	5	—	7	1	25	0.4	65	38.4
35–44	11.1	40,761	7	—	6	—	3	3	19	0.4	42	45.2
45–54	9.5	34,886	5	1	3	—	7	—	16	0.4	27	59.2
55–64	6.4	23,502	6	—	3	—	2	1	12	0.5	18	66.6
65	4.8	17,626	4	—	—	—	1	—	5	0.3	5	100.0
N.R.	—	—	1	—	—	—	—	—	1	—	2	50.0
All Ages ..	100	367,216	132	11	67	3	47	10	270	0.7	790	34.17

CLINICAL OBSERVATIONS.

From 427 investigation cards, received from various Hospitals, the following clinical observations were recorded.

The cardinal symptoms of headache, fever and vomiting were generally present. Kernig's sign was obtained in 365 cases whilst opisthotonos was marked in 285. Babinski's signs could be demonstrated, however, in only 33 patients. Spasm and hyperaesthesia were recorded in 141 and 144 cases respectively and Trousseau's sign was obtainable in 27 persons.

COMPLICATIONS.

(*a*) *Optic.*—27 cases developed optic neuritis the average duration of symptoms being 10 days (Min.: 2 days, Max.: 21 days).

14 cases of strabismus occurred ; 2 of blindness and one of diplopia.

The total number of cases with eye complications was thus 44 or 10.5% of all cases.

(*b*) *Auditory*—41 cases of deafness were recorded. 4 permanent and 37 temporary the average duration of the latter being 9 days (Min.: 2, Max.: 24).

The percentage rate of auditory complications was 9.7% of total cases.

(*c*) *Herpes Labialis.*—This was observed in 121 cases the average duration being 6 days.

(*d*) *Skin Eruptions.*—Eruptions echymotic-papulovesicular or erythemata petechial occurred in 35 cases.

(*e*) *Arthritis.*—21 cases of arthritis were seen the duration varying from 4–90 days.

(*f*) Rarer complications noted were generalized oedema, hydrocephalos, orchitis, haematuria, retention of urine and Broncho-pneumonia.

Duration.—The duration of the disease was found to be extremely variable, but of 427 cases investigated, who recovered, the average duration was 25 days, the minimum being 4 days.

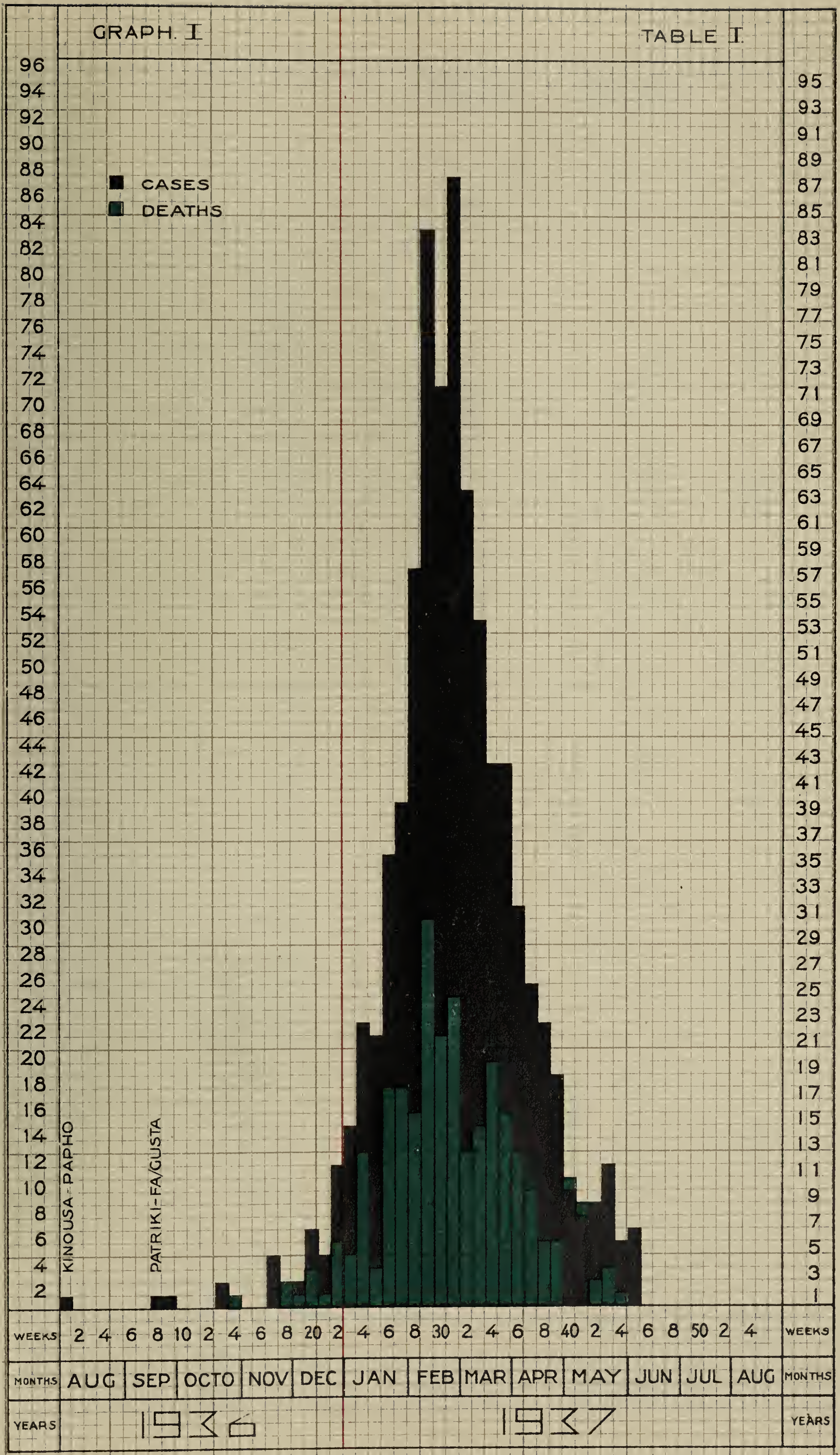
In illustration the following records are appended.

(1) *Mustafa Omer, age* 12—*Ambelikou* (*Nicosia*).

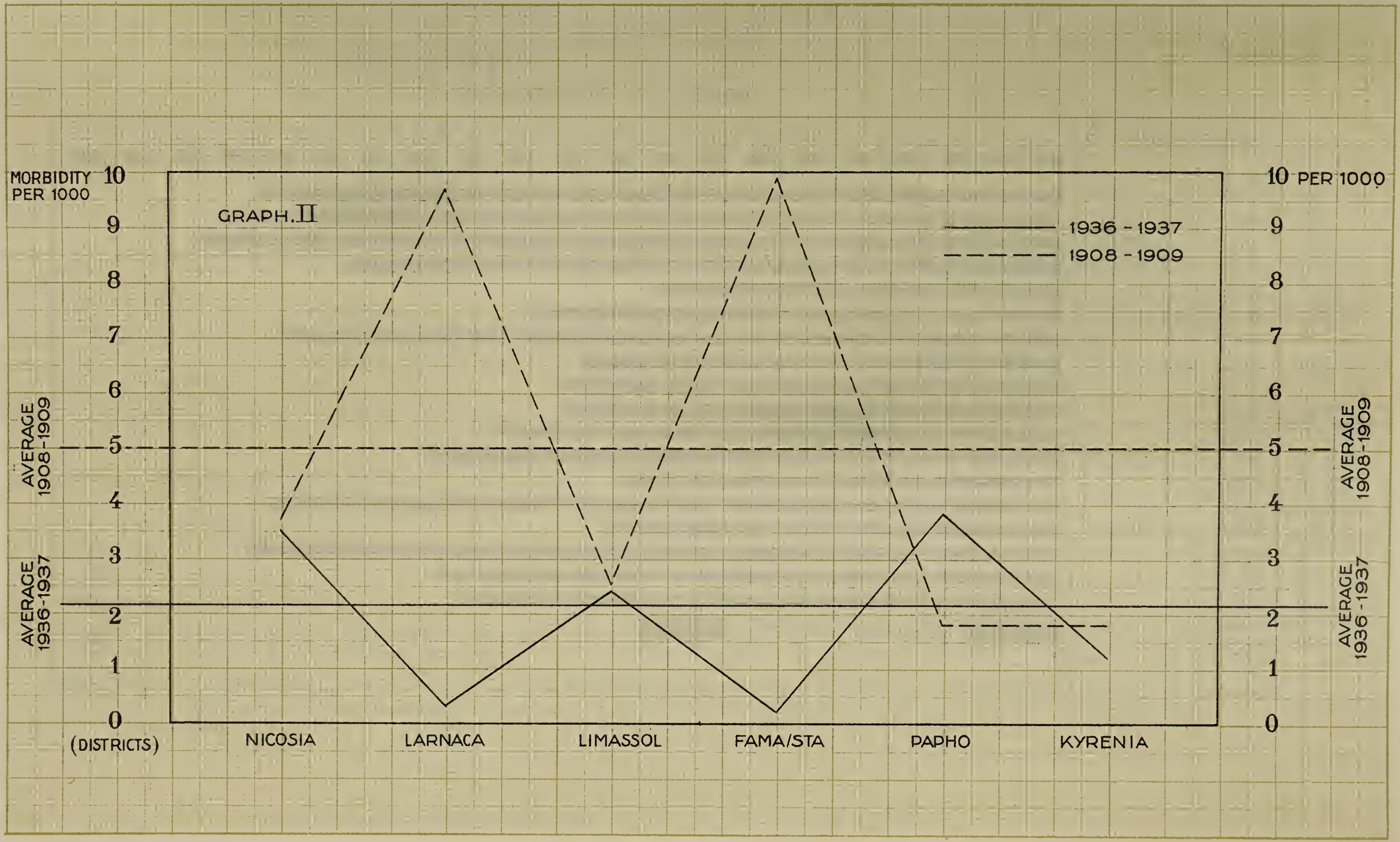
Attending Doctor : Dr. P. Smitten, Chief Medical Officer, Cyprus Mines Corporation.

Date of Onset	*Date of Diagnosis*	*Date of Discharge*
—	—	—
27/12/36	29/12/36 (C.S.F. turbid.)	31/12/36

Treatment : 10 cc. A.M.S. intrathecally.

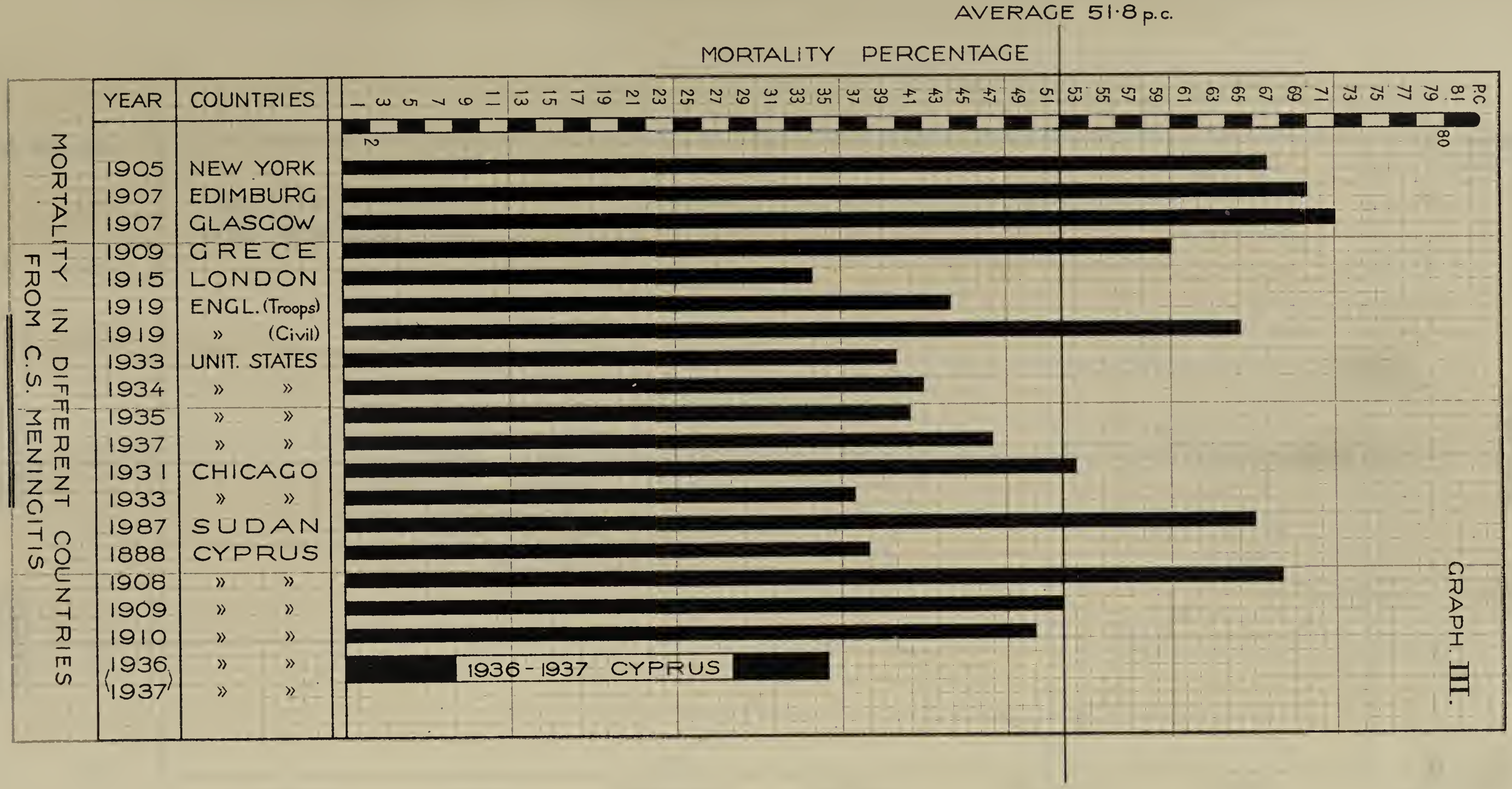


EPIDEMIC
OF C. S. MENINGITIS



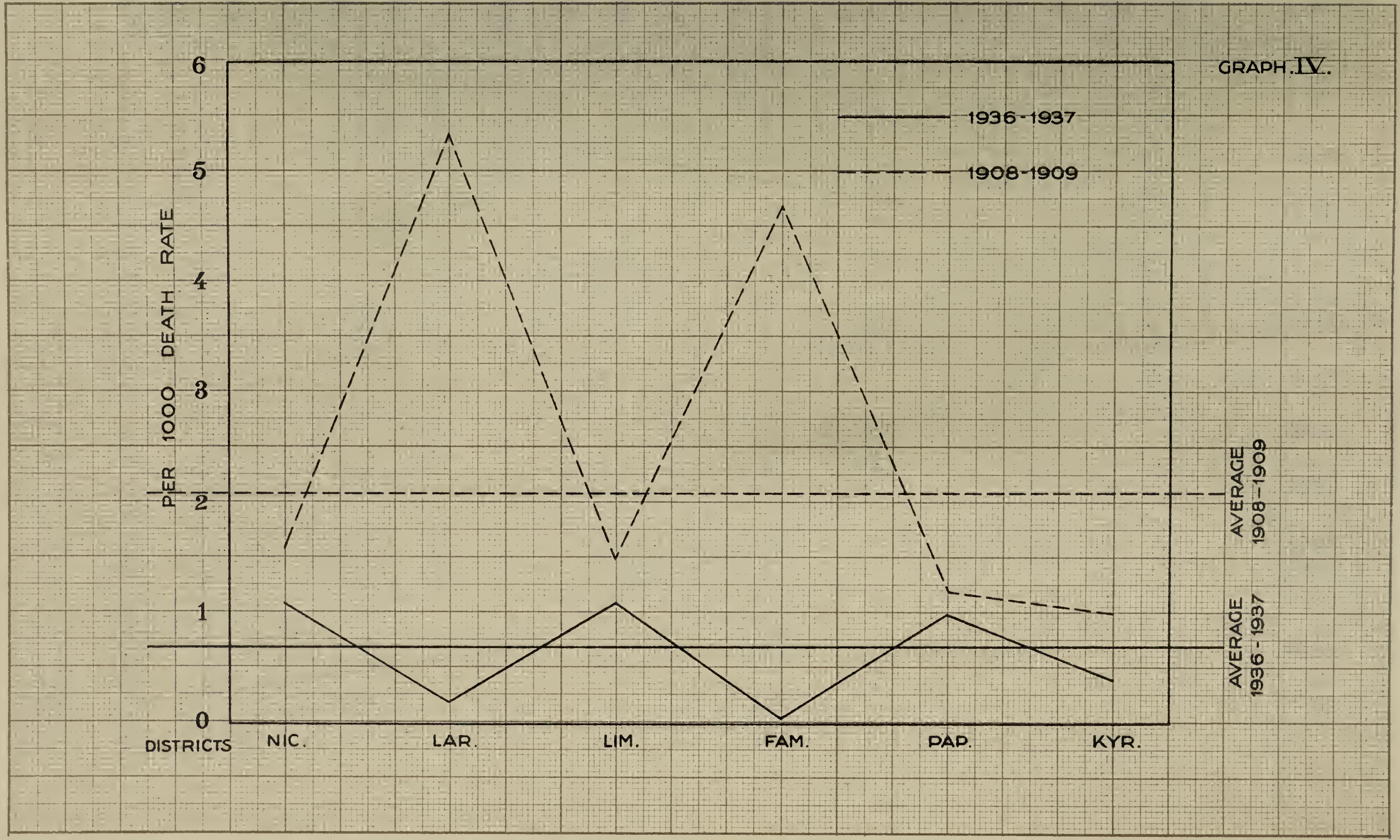
GRAPH. II

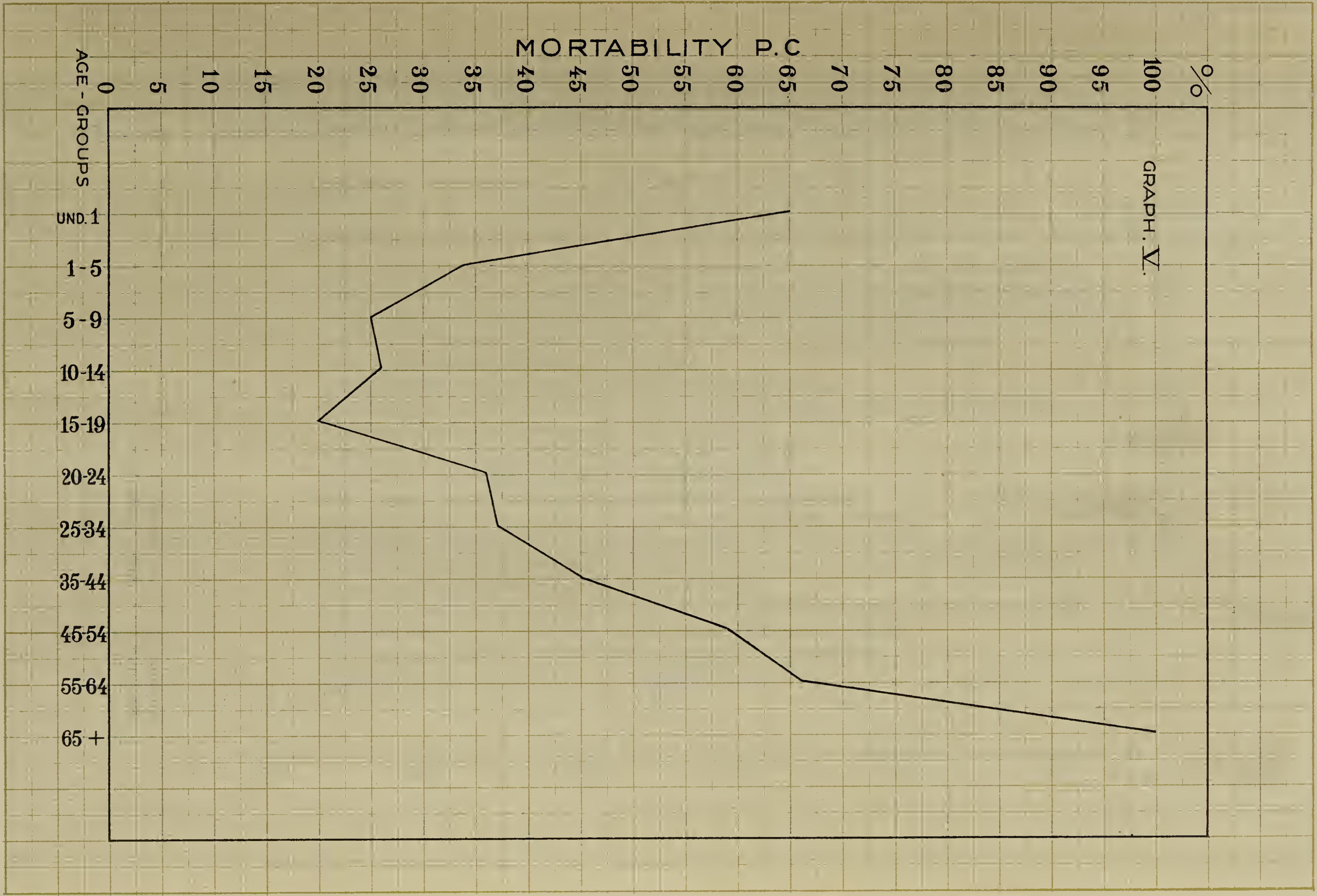
MORBIDITY PER 1000
10 PER 1000
10
9
8
7
6
5
4
3
2
1
0
AVERAGE 1908-1909
AVERAGE 1936-1937
1936 - 1937
1908 - 1909
(DISTRICTS)
NICOSIA
LARNACA
LIMASSOL
FAMA/STA
PAPHO
KYRENIA


MORTALITY IN DIFFERENT COUNTRIES FROM C.S. MENINGITIS

GRAPH. III.

GRAPH IV.


1936-1937
1908-1909
PER 1000 DEATH RATE
6
5
4
3
2
1
0
DISTRICTS
NIC.
LAR.
LIM.
FAM.
PAP.
KYR.
AVERAGE 1908–1909
AVERAGE 1936 - 1937



GRAPH. V.

MORTABILITY P.C
AGE - GROUPS
UND. 1
1-5
5-9
10-14
15-19
20-24
25-34
35-44
45-54
55-64
65 +
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
%

(2) *Michael Loizou, age* 11—*Episkopi* (*Paphos*).

Attending Doctor : Dr. S. Constantinides, Medical Officer, Paphos.

Date of Onset	*Date of Diagnosis*	*Date of Discharge*
—	—	—
3/3/37	3/3/37	7/3/37
	(C.S.F. positive.)	

Treatment : 20 cc. A.M.S. intrathecally.

(3) *Panayiotis Savva, age* 20—*Anarita* (*Paphos*).

Attending Doctor : Dr. S. Constantinides, Medical Officer, Paphos.

Date of Onset	*Date of Diagnosis*	*Date of Discharge*
—	—	—
24/2/37	24/2/37	28/2/37
	(C.S.F. positive.)	

Treatment : 20 cc. A.M.S. intrathecally.

(4) *Nicolas Nicolaou, age* 22—*Lefka* (*Nicosia*).

Attending Doctor : Dr. P. Smitten, Chief Medical Officer, Cyprus Mines Corporation.

Date of Onset	*Date of Diagnosis*	*Date of Discharge*
—	—	—
18/9/36	18/9/36	10/12/36
	(C.S.F. positive.)	

Treatment : 350 cc. A.M.S. intrathecally.

Complication : Parotitis.

BACTERIOLOGICAL EXAMINATION OF PATIENTS AND CONTACTS.

As is shown on Table XII, 690 specimens of cerebro-spinal fluid were examined at the Government Laboratory during the epidemic. Out of 690 fluid specimens tested 237 were positive for meningococcus, *i.e.* 34.3 %, 284 were without meningococcus but contained many "Polymorphonuclear cells," *i.e.* 41.1 %, and 169 were negative for meningococcus and polymorphonuclears, *i.e.* 23.6 %. All cerebro-spinal fluid which presented "polymorphonuclear" and no "meningococcus" was turbid and was taken from cases with obvious clinical meningitis. Taking into consideration that many of these fluids were sent to the Laboratory without incubation from distant districts and villages, allowance must be made for the disappearance of the meningococcus in transit.

In addition to 690 cerebro-spinal fluid specimens, 4,739 nasal swabs, taken from close contacts, were examined and 244 were found positive giving a percentage of 5.1 %.

Cerebro-spinal fluids and nasal swabs taken from Lefka Division are not included in the above figures as all these were examined at Pendayia Hospital and no records of these examinations are available.

TABLE XII.—BACTERIOLOGICAL EXAMINATION OF CEREBRO-SPINAL FLUID AND NASAL SWABS.

Months	C. S. Fluid with Meningococcus	C. S. Fluid with Polymorphonuclear	C. S. Fluid negative	% of C. S. Fluid positive	Total number of C. S. Fluid examined	Nasal Swabs with Meningococcus	Nasal Swabs negative	% of Nasal Swabs positive	Total number of Nasal Swabs examined
September, 1936 ..	1	4	4	55.5	9	—	20	—	20
October, 1936 ..	2	5	2	77.7	9	11	40	21.5	51
November, 1936 ..	4	2	1	85.7	7	11	30	36.8	41
December, 1936 ..	14	10	3	89.0	27	32	96	24.2	128
January, 1937 ..	41	19	30	66.6	90	55	360	10.8	415
February, 1937 ..	79	76	35	81.5	190	52	1,556	3.2	1,608
March, 1937	57	110	39	81.0	206	56	1,435	3.7	1,491
April, 1937	31	40	29	71.0	100	27	755	3.4	782
May, 1937	8	18	26	50.0	52	—	203	—	203
Total	237	284	169	75.5	690	244	4,495	5.1	4,739

As regards identification and classification of the type of meningococcus causing this epidemic, unfortunately insufficient tests were made due to the lack of "specific" serum at the beginning of the epidemic. A few tests made towards the end of the epidemic with specific serum A. and B. did not give any agglutination for these types except in one case which gave an agglutination 1 : 50 for "Meningococcus B."

As to the isolation and daily examination of healthy carriers, except for two particular cases which continued to be positive carriers for 25 consecutive days, regular spraying of the nasopharynx with a solution of zinc sulphate 1:100 and trypaflavine 1:500 freed carriers from the meningococcus in a short time, *i.e.* in from 3 to 10 days.

HOUSING.

Overcrowding and Dissemination.—From Tables A–B it is shown that, of 1,036 sleeping-rooms examined in the 12 villages where incidence was highest—

(1) The average number of persons occupying each room was 3.8 per room. Air space was sufficient for 4.5 occupants.

(2) The average cubic space per head was 986 cubic feet, *i.e.* 380 cubic feet over the standard allowed which is considered as being 600 cubic feet per head.

(3) 51.7% of all rooms gave more than the standard cubic space necessary per head.

(4) The average area of window is 10.8 square feet per room instead of 40 square feet required for proper ventilation.

(5) The relation of the square area of the windows to the square area of the floor is 1:81 instead of 1:7 required for proper lighting and ventilation.

(6) 27% of rooms had no windows at all.

(7) 40% live in the same room with animals during winter time.

(8) 11.6% of the rooms have adequate ventilation and 88.4% have not.

(9) The floor was made of earth in 59% of the rooms, covered with native tiles in 13.3%, cemented in 18.7% of the rooms and made of wood in 9%.

SANITARY ARRANGEMENTS.

92.42% of the houses had no latrine whatsoever and use an open yard as such.

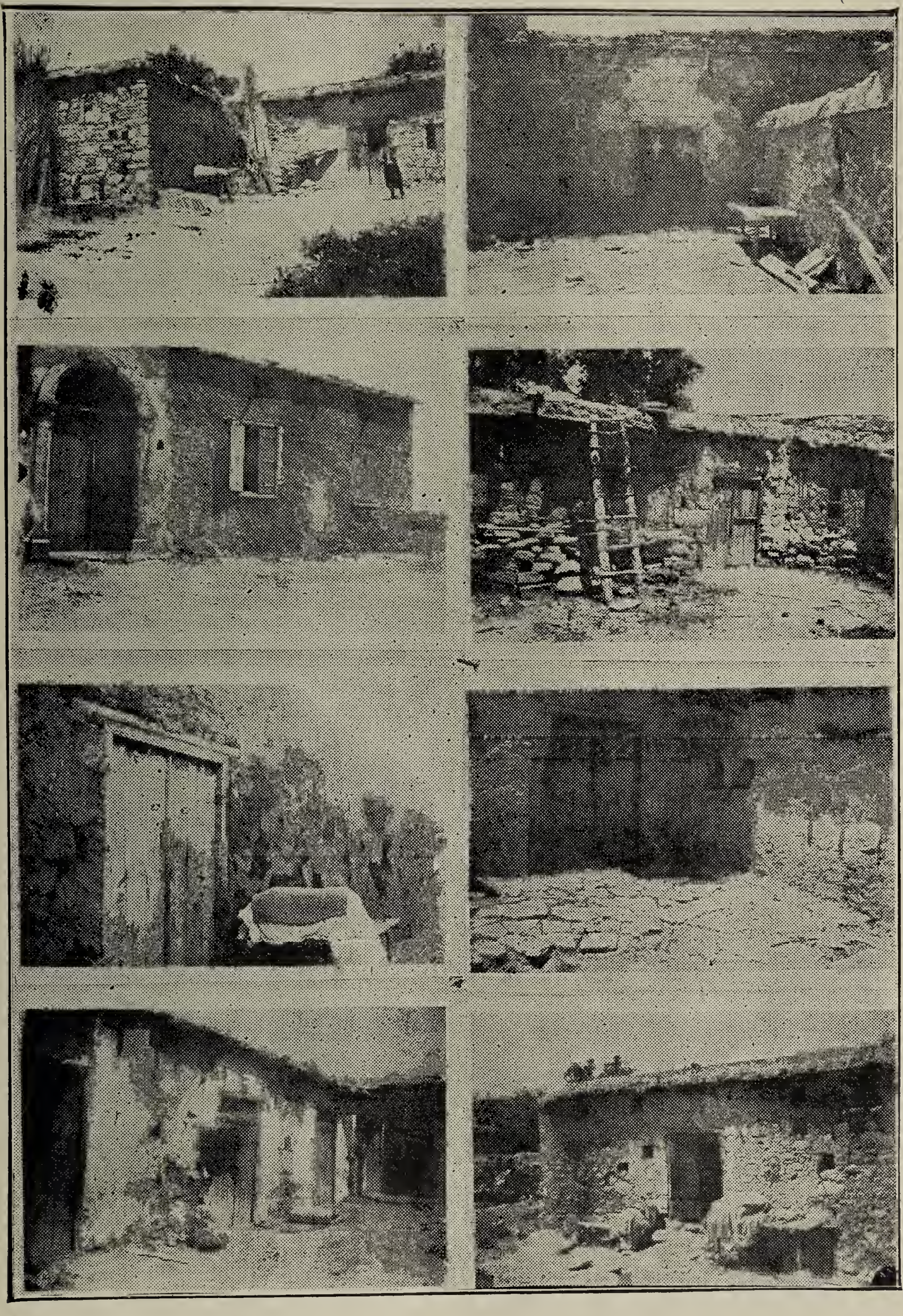
92% of the houses have no special room for laundry purposes although washing is almost invariably done on the premises. 88.5% of the houses have no kitchen.

TABLE A.—AVERAGE FIGURES FROM A SURVEY ON RURAL HOUSING.

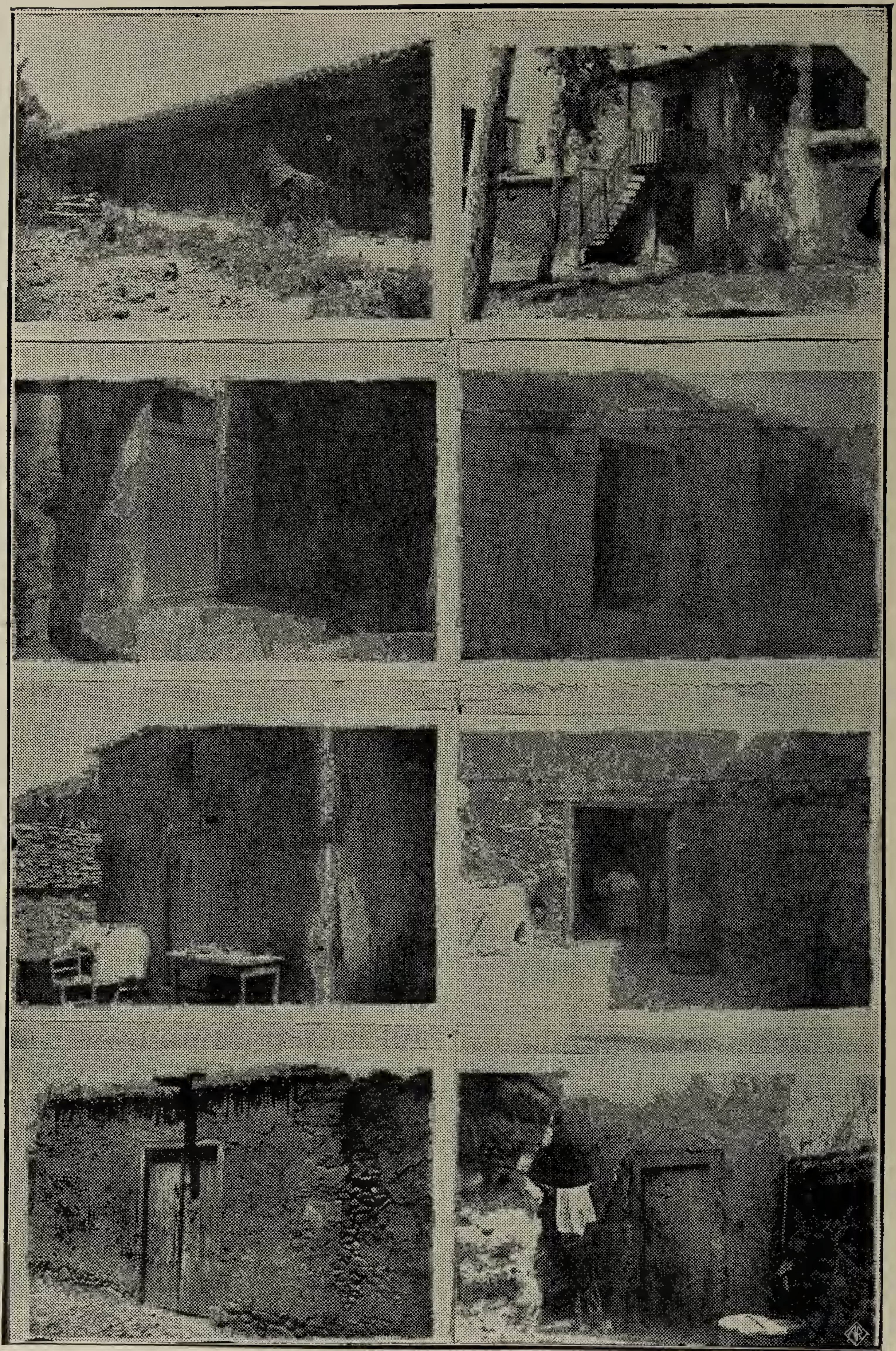
Serial No.	Village	District	No. of houses examined	No. of rooms examined	No. of persons occupying	Cubic space per head	Relation of cubic space to the standard limit, 600	Over	Under	Sq. area of existing windows	Without windows	Relation of windows to the floor (1:7)	Sq. area of windows required in sq. ft.	No. of persons allowed for each room	Approximate daily wages of occupants in *p.*	Ventilation	
																Good	Bad
1	Lefka..	Nicosia	56	146	3.3	654	+ 54	74	72	10.7	37	1:91	40	3.2	18	55	91
2	Kato Kopia	,, ...	100	100	3.8	1,221	+621	87	13	19.3	9	1:55	40	3.8	16	7	92
3	Ambelikou	,, ..	14	14	4.4	571	— 29	4	10	10.6	—	1:35	35	3.3	18	4	10
4	Limassol	Limassol ..	24	30	4.0	931	+331	14	10	19.0	2	1:57	35	2.0	19	—	14
5	Kyperounda.. ..	,, ...	165	190	4.3	1,160	+460	47	143	15.7	56	1:37	45	5.3	14	42	123
6	Ayios Therapon ..	,, ...	104	127	4.4	1,172	+472	21	106	16.5	21	1:43	38	5.6	15	13	91
7	Episkopi	Paphos	72	99	4.0	970	+370	15	84	2.4	44	1:180	30	4.5	16	—	99
8	Letimbou	,, ...	56	84	2.6	1,093	+493	76	8	3.9	25	1:160	37	6.0	15	—	84
9	Peyia..	,, ...	55	81	3.2	1,111	+511	64	17	4.4	24	1:138	38	6.2	16	—	81
10	Khrysokhou	,, ...	43	46	3.6	980	+380	38	8	14.5	3	1:49	40	4.0	13	—	43
11	Sarama	,, ...	13	13	5.0	870	+270	9	4	4.0	3	1:100	47	5.0	15	—	13
12	Anarita	,, ...	78	105	3.7	1,078	+478	86	19	9.0	23	1:24	40	5.3	13	1	77
	Total		780	1,036	—	11,811	—	534	502	—	247	—	—	—	—	11.6	88.4
	Percentage on the total		—	—	—	—	—	51.7	48.3	—	23.7	—	—	—	—	11.6	88.4
	Average per room		—	—	3.8	986	+380	—	—	10.8	—	1:81	40	4.5	15½	—	—

TABLE B.—FIGURES FROM A SURVEY ON RURAL HOUSING.

Serial No.	Village	District	Floor				Latrines		Laundry		Water Supply		Kitchen	
			Earth	Marble	Cemented	Wood	Yes	No	Yes	No	Piped	Well	Yes	No
1	Lefka	Nicosia ..	46	—	97	3	33	113	11	145	146	—	28	118
2	Kato Kopia ..	,, ..	79	17	4	—	—	100	50	50	—	100	49	51
3	Ampelikou ..	,, ..	12	—	1	1	—	14	—	14	—	14	—	14
4	Limassol	Limassol ..	11	13	—	6	28	2	20	4	30	—	20	10
5	Kyperounda ..	,, ..	118	—	—	72	4	186	1	189	189	1	15	175
6	Ay. Therapon ..	,, ..	29	—	87	12	—	127	1	126	127	—	13	114
7	Episkopi	Paphos ..	89	7	3	—	—	99	—	99	99	—	—	99
8	Letimbou	,, ..	—	84	—	—	—	84	—	84	84	—	—	84
9	Peyia	,, ..	74	5	2	—	—	81	—	81	71	10	—	81
10	Khrysokhou ..	,, ..	46	—	—	—	14	32	—	43	46	—	4	42
11	Sarama	,, ..	13	—	—	—	—	13	—	13	13	—	—	13
12	Anarita	,, ..	93	12	—	—	—	105	—	105	105	—	—	105
	Total	.. .. ..	610	138	194	94	79	957	83	953	911	125	129	907
	% on the total ..	.. .. ..	59.0	13.3	18.7	9.0	7.6	92.4	8.0	92.0	88.0	12.0	11.5	88.5



Some houses where Cerebro-Spinal Meningitis cases occurred.



Some houses where Cerebro-Spinal Meningitis cases occurred.

WATER SUPPLY.

88% use piped water and 12% wells.

Financial Position of Occupants.—The approximate average wages of the occupants is 1*s.* 6½*p.* per day.

Conclusion.—It will be seen from the above that while air space is sufficient, ventilation is very bad indeed.

MEASURES TAKEN.

Prompt measures were taken by the Department to combat the disease as soon as cases appeared. On 31st October, 1936, though only 5 cases of Meningococcal Meningitis had been observed, out of which 3 were in the mining area, a thorough investigation of the housing and overcrowding was undertaken and steps to improve existing conditions were immediately taken. Examination of all miners and school pupils was carried out twice daily by the sanitary staff.

When on account of the meteorological conditions which had favoured its growth it was clear that the disease had assumed epidemic proportions the activities of the Medical and Health authorities comprised :—

(1) Isolation and treatment of patients in special isolation hospitals.
(2) Immediate visit and examination of cases or suspected cases notified from any part of the Colony and treatment of clinically obvious or suspected cases carried out pending the bacteriological confirmation of diagnosis.
(3) Search and bacteriological examination of all contacts and isolation of all positive carriers.
(4) Immediate removal of all cases to the nearest isolation hospital by special ambulance accompanied by trained staff.
(5) Prohibition of fairs and other massing of population in order to prevent overcrowding.
(6) Restriction of overcrowding in public places such as theatres, cinemas, coffee-shops, cabarets, dancing-halls, etc., by fixing the number of persons allowed to enter and stay therein.
(7) Closing of all public places considered to be unhygienic or to be in such a state as to be dangerous to Public Health.
(8) Control, as far as possible, of the movement of the people especially in places, villages or areas where the disease assumed real epidemic form.
(9) Closing of schools in the more heavily-attacked villages.
(10) Active propaganda by lectures and pamphlets.
(11) Absolute quarantine of villages with high incidence.

TEMPORARY ISOLATION HOSPITALS.

TABLE XIII.—Four central temporary hospitals were established in the Colony during this epidemic :—

(1) At Nicosia General Hospital.
(2) At Pendayia (Annex to Pendayia Cyprus Mines Corporation General Hospital), Nicosia District.
(3) At Polemidhia, Limassol District.
(4) At Paphos (V.D. Clinic building at Paphos District Hospital).

(1) *Nicosia Isolation Hospital.*—Opened on the 10th January, 1937, close to the General Hospital but absolutely detached therefrom with accommodation consisting of 32 beds. 156 patients were treated in this hospital, of whom 43 died, giving a mortality percentage of 27.5%.

Patients from all over the Nicosia and Kyrenia Districts except those from Lefka were admitted to this hospital.

The hospital was under the charge of Dr. M. Coureas, Honorary Consulting Physician to the Nicosia Hospital.

(2) *Pendayia Isolation Hospital.*—This hospital at Pendayia was a new building erected close to the general Hospital of the Cyprus Mines Corporation.

It opened on September, 1936, and closed on 8th May, 1937. In this hospital 50 beds were available for Meningitis cases.

At the beginning of the epidemic, 12 beds in Pendayia General Hospital were reserved for Meningitis cases and were in use until the 25th January, 1937, when a special Isolation Hospital with 25 beds was opened in a building adapted for the purpose. Further special isolation accommodation became necessary and 25 further beds were provided in a building close to the first isolation hospital. In these buildings 202 Meningitis patients were treated of whom 61 died, giving a mortality rate of 30.10%. If 26 cases of death within 48 hours of admission are excluded the mortality rate sinks to 19.8%.

Although this hospital is ordinarily only a private hospital for the use of employees of the Cyprus Mines Corporation, on this occasion it was open for the treatment of any Meningitis case coming from the Lefka or the Tilliria District.

Of the above 202 patients—
46 were employees of Cyprus Mines Corporation,
71 were members of the families of these employees, and
85 were cases occurring in people not in the employ of the Company.

Pendayia Isolation Hospital was under the charge of Dr. P. Smitten, the Chief Medical Officer of the Cyprus Mines Corporation, assisted by Dr. B. Vroblesky and Dr. P. Demetriades, Health Officer, Medical Department.

(3) *Polemidhia Isolation Hospital.*—This hospital was regarded as a Central Isolation Hospital and was used mainly for cases sent there from Nicosia, Limassol and Paphos Districts.

50–100 beds were available in this hospital which opened on 9th February, 1937, and was still in operation on 31st May, 1937.

During this period 129 cases were admitted out of which—

92 were sent from Limassol District.
21 „ „ Nicosia „
10 „ „ Paphos „
5 „ „ Kyrenia „
1 was „ Larnaca „

Out of these 129 cases, 40 proved fatal giving a mortality rate of 31.0%.

This hospital was in the charge of Dr. D. C. Ogilvie, District Medical Officer, Limassol.

(4) *Paphos Isolation Hospital.*—The Venereal Diseases Clinic, in Paphos District Hospital, was converted into a special isolation hospital for Meningitis patients on 1st January, 1937, with 24 beds.

In this hospital 102 patients were admitted of whom 22 died, giving a mortality rate of 21.7%. The District Medical Officer was in charge of this hospital.

(5) *Karaolos (Famagusta) Isolation Hospital.*—15 beds were made available from the Famagusta District Hospital and sent to Karaolos, for Meningitis patients. This small hospital started on 5th February, 1937, and closed on 15th April, 1937.

11 patients were treated there of whom 4 died, giving a mortality rate of 36.2%. The District Medical Officer, Famagusta, was in charge of this hospital.

TEMPORARY RURAL ISOLATION HOSPITALS.

In addition to the above-mentioned isolation hospitals three other rural hospitals were opened in three villages where the disease assumed epidemic form.

These hospitals were :—

(1) *Kato Kopia Village, Nicosia District.*—In this hospital opened on 22nd January, 1937, and closed on 27th February, 1937, 42 Meningitis patients were admitted, all from Morphou Division, of whom 9 died, giving a mortality rate of 21.2%.

This hospital was established by the Health Officer, Dr. C. S. Markides.

(2) *Letimbou (Paphos) Rural Isolation Hospital.*—This hospital was established by Dr. Markides, Health Officer, in the school building of Letimbou village on 8th January, 1937, and was in operation up to 5th February, 1937, dealing with Meningitis patients from Letimbou and the neighbouring villages.

15 beds were available in this hospital, but only 9 cases were admitted, of whom 3 died giving a mortality rate of 33.3%. The District Medical Officer, Paphos, was in charge of this Hospital.

(3) *Episkopi (Paphos) Rural Isolation Hospital.*—It was opened on 5th February, 1937, and closed on 26th March, 1937.

22 patients were treated there, of whom 6 died, giving a mortality rate of 27.7%. The District Medical Officer, Paphos, was in charge.

COMPARISON BETWEEN THE EPIDEMICS OF 1908–1909 AND 1936–1937.

It is interesting to compare the last two epidemics of Meningococcal Meningitis occurring in Cyprus, *i.e.* in 1908–1909 and 1936–1937 as regards morbidity, death rates and mortality percentage, and as regards the various factors favouring or disfavouring the transmission, the dissemination and the infective power of the virus.

The following table shows the various figures :—

Epidemics	*Cases*	*Deaths*	*Morbidity per* 1,000	*Death rate per* 1,000	*Mortality per cent.*
Dec., 1908–May, 1909—six months	1,153	600	4.9	2.1	52.0
Sept.,1936–May,1937—nine months	790	270	2.1	0.7	34.1
Difference in 1936–1937	363	330	2.8	1.4	17.9
Difference	31.5%	55.0%	57.1%	66.6%	34.4%

TABLE XIII.—SPECIAL ISOLATION HOSPITALS ESTABLISHED DURING THE EPIDEMIC OF CEREBRO-SPINAL MENINGITIS UP TO 31ST MAY, 1937.

Place	District	Date of opening	Date of closing	No. of beds.	No. of cases attended	No. of deaths	Mortality %	Medical Officer in Charge.
Nicosia	Nicosia	Jan. 10th, 1937 ..	Still in operation ..	32	156	43	27.5	Hon. Consulting Physician, Dr. Coureas.
Pendayia	,, ...	Sept., 1936	May 8th, 1937	50	202	61	30.1	Dr. P. Smitten, C.M.O., C. M. Corporation.
Kato Kopia ..	,, ...	Jan. 22nd, 1937 ..	Feb. 27th, 1937	30	42	9	21.2	Dr. Markides, H.O. & M.O., Morphou.
Larnaca	Larnaca	—	—	—	8	1	12.6	D.M.O., Larnaca, Dr. Bevan.
Polemidhia ..	Limassol	Feb. 9th, 1937	Still in operation.. ..	50	129	40	31.10	D.M.O., Limassol, Dr. Ogilvie.
Karaolos	Famagusta ..	Feb. 5th, 1937	April 15th, 1937	15	11	4	36.2	D.M.O., Famagusta, Dr. Philips.
Ktima	Paphos	Jan. 1st, 1937	Still in operation	24	102	22	21.7	M.O., Paphos, Dr. Constantinides.
Letimbou	,, ...	Jan. 8th, 1937	Feb. 5th, 1937	15	9	3	33.3	M.O., Paphos, Dr. Constantinides.
Episkopi	,, ...	Feb. 5th, 1937	March 26th, 1937.. ..	30	22	6	27.7	M.O., Paphos, Dr. Constantinides.
Total number of hospitals .. 9.		—	—	246	681	189	27.7	Director of Medical Services.

In view of the fact that during the epidemic of 1936–1937 many factors creating special difficulties in the way of fighting the dissemination of the virus were encountered, it is difficult to understand and so reconcile the above differences.

These factors may be detailed as follows :—

(1) *Months favouring the Seasonal Prevalence*—1908–1909—six months; 1936–1937—nine months.

(2) *Means of Transport and Communication*—1908–1909 : There were no facilities for rapid transport of people from place to place and consequently transmission of the virus from an infected place to a clean area was not rendered easy.

1936–1937 : The expansion of motor transport and the increase in the number of the population moving from place to place in the course of their daily lives facilitated the spread of disease.

(3) *Overcrowding.*—1908–1909 : No cinemas or dance-halls were in existence and carnival festivities were not held, there were no cabarets, no factories, no mines, and not so many coffee-shops in rural communities, all factors favouring both the transmission and transfer of the virus to different localities.

1936–1937 : The presence of cinemas, cabarets, dance-halls, etc., obviously played a considerable part in converting the endemic and sporadic infection into an epidemic form.

(4) *Higher Susceptibility and Lower Resistance.*—1936–1937 : The simultaneous epidemic of mild influenza which spread over the Island undoubtedly increased the number of susceptibles and so spread the infection.

(5) *Atmospheric.*—1936–1937 : Extremely cold and rainy weather for 40 consecutive days during January and February, meant that conditions of overcrowding were heightened and intensified.

In conclusion, it is possibly of interest to mention that an epidemic of Cerebro-Spinal Meningitis has invariably been followed in Cyprus by another epidemic of major importance the following winter. In the circumstances and considering that a small quantity of Parke, Davis and Company's anti-meningococcus vaccine had been utilized for the immunization of isolation hospital staff in the mining area during the above epidemic, the Director of Medical Services has arranged to carry out protective injections of miners and village populations throughout the Island where incidence of the disease was high and the carrier rate has been shown to remain constant and considerable. The Cyprus Mines Corporation will assist in the expense of this campaign and many thousands will be given the vaccine which will be supplied by Parke, Davis and Company at a moderate charge ; moreover a limited experience has tended to show that the sulphanilamides are useful in the treatment of the disease and so, cases presenting, will be so treated if our opinion as formed in the epidemic described is maintained. The result of this treatment and the arranged programme of prevention will be fully reported late in 1938 or early in 1939.

REFERENCES.

Charles Bolduan, M.D., and Mary E. Goodwin, M.D., New York, " A clinical and Bacteriological study of the communicability of Cerebro-Spinal Meningitis and the Meningitis and the probable source of contasion." (*Medical News*, 30th December, 1905.)

Dr. Antoine Homsy, (de la Faculte de Medicine de Paris, Ancien Externe des Hopitaux de Paris). " Contribution a l'Etude de l'Epidemiology et de la Prophylaxie de la Meningite Cerebro-Spinale Epidemique." Paris, 1937.

Charles Bolduan, M.D., Samuel Frant, M.D., (*Quarterly Bulletin of City of New York, Department of Health*). " The recent increase in Meningococcus Meningitis."

M. Joseph Arkwright, *The British Medical Journal* (March, 1915).

Docter, *Bull. Inst. Pasteur*, Vol. VII.

A. Compton, *Ann. de l'Inst. Pasteur*, Mars, 1918.

Prof. Yer. Alevizatos, " Lectures in Epidemiology."

Haji Vasiliou, " Lectures on Vital Statistics."

Prof. Ycrasimos P. Alevizatos, M.D., " Epidemesis and Crypromiansis."

Asclepios, " revue medicalle mensuelle " (5th year—No. 7, July, 1934, Athens).

League of Nations (Health Organization). *Annual Epidemiological Report for the Year* 1935. (Geneva, 1937).

N. Macleod, " Weekly Returns of Infectious Diseases from Sudan."

Weekly Public Health Reports issued by the United States Public Health Service.

Schamberg Kolmer, " Acute Infectious Diseases."

APPENDIX C.

REPORT OF THE PATHOLOGICAL BRANCH FOR 1937.

By J. C. Tull, M.D., F.R.C.P., *Government Pathologist.*

1937 was the busiest year in the history of this Branch, the total number of specimens examined, excluding medico-legal ones, being 15,699, as compared with 10,031 in 1936 and 10,423 in 1935. This increase was mainly due to the continuance of the epidemic of meningococcus meningitis, which began in the last two months of 1936, but the increase has also been definite in the other activities of the Branch.

Number of Specimens examined each Month.

January	1,035	July	1,155
February	2,377	August	858
March	2,396	September	1,330
April	1,716	October	1,166
May	914	November	891
June	1,001	December	860

The marked increase in February, March and April coincided with the height of the epidemic of meningococcus meningitis.

Routine Investigations.

Blood Films.—483 were examined for malaria parasites, as compared with 511 in 1936. In 105 *P. falciparum* was found (39 in 1936); in 17 *P. vivax* was present (35 in 1936); and in 2 quartan parasites were present.

Urine.—555 specimens were examined, being the same number as in 1936.

Sputa.—901 specimens were examined, acid fast bacilli being present in 639, compared with 355 specimens in 1936, with acid fast bacilli present in 261.

Stools.—144 specimens were submitted, compared with 70 in 1936. The ova of *ascaris lumbricoides* were present in 39 and *entamoeba histolytica* in 2.

Urethral and Cervical Smears for Gonococci.—1,098 films were examined, compared with 1,032 in 1936. The gonococcus was present in 355 specimens, compared with 377 in 1936.

Smears from spleens of rats for B. pestis.—735 films were examined, compared with 735 in 1936. None were positive to *B. pestis.*

Blood Counts.—75 were made.

Cerebro-spinal Fluid.—725 fluids were submitted for examination compared with 95 in 1936. The meningococcus was present in 239, and polymorphonuclears only in 309.

Leprosy.—81 nasal swabs and skin-clips were examined. Acid fast bacilli were present in 30.

Fluid from Serous Sacs for Cells.—32 specimens were examined, as compared with 4 in 1936.

Cultures from Pus.—24 specimens were examined, from which the *staphylococcus aureus* was grown in 7, the *staphylococcus albus* in 6, and *B. coli* in 1.

Naso-pharyngeal Swabs for Meningococci.—Cultures were made from 5,901 swabs, compared with 308 in 1936. The meningococcus was present in 259, compared with 54 in 1936, and the Klebs-Lœffler bacillus was isolated from 3 cultures. An attempt was made to estimate the carrier rate of the meningococcus during the quiescent stage of the epidemic. In April naso-pharyngeal cultures were made from 123 soldiers, and in September similar cultures were made from 500 persons in a mining area, where there had been no cases of the disease for over two months. 32 of these persons, 5 per cent. approximately, were found to be harbouring the meningococcus.

Because of the few specimens of cerebro-spinal fluid arriving in the Laboratory uncontaminated it was not possible to type large numbers, but the few in which the type was investigated belonged to Group II. [Standards Laboratory (Oxford) classification.]

Blood Cultures.—Three were made, compared with 11 in 1936. *B. typhosus* was isolated from one.

Vaccines.—Three and a half litres of T.A.B. vaccine were prepared and distributed through the Health Branch. Three autogenous vaccines were prepared.

Complement Fixation Tests.—The Wassermann Reaction was carried out on 3,810 sera, compared with 4,698 in 1936. 745 sera were positive, compared with 1,269 in 1936. The Weinberg test for hydatid disease was done on 13 specimens, of which two were positive.

Agglutination Test for the Typhoid Group.—This was carried out on 736 sera, compared with 721 in 1936. 219 sera were positive to *B. typhosus*; 34 to *B. paratyphosus A*; and 82 to *B. paratyphosus B.*

Drinking Waters.—119 specimens were examined, as against 122 in 1936. Of these, 36 showed *B. coli* present in 0.1 cc., 4 in 0.5 cc. only; 21 in 1 cc. only; 13 in 5 cc. only; and 4 in 10 cc. only. 41 were negative to *B. coli* in 25 cc.

Histology.—345 blocks were cut from 109 pieces of tissue submitted for histological examination, compared with 31 in 1936. The following malignant growths were identified :—

Epithelioma.—	Cervix uteri		7
	penis		3
	face		3
	scrotum		1
	lip		1
	tongue		1
	chest wall		1
Carcinoma.—	Breast		5
	uterus		4
	ovary		2
	lung		1
	stomach		1
	liver		1
Sarcoma		6	
Epulis		3	
Rodent ulcer		3	
Hydatid disease.—	Breast		1
	liver		1

Post-mortem Examinations.—In 1937 a regulation was made that copies of post-mortem findings throughout the Island must be submitted to the Pathologist. During the year, 59 autopsies were performed by Medical Officers in the various districts and 15 by the Pathologist himself. All these examinations were carried out at the request of the Police. The following were the main causes of death : murder by mutilation, 1; fractured skull with cerebral haemorrhage, 10; general peritonitis following infected uterus after abortion, 1; lobar pneumonia, 5; pulmonary tuberculosis, 3; multiple penetrating stab wounds, 5; asphyxia by drowning, 6; multiple injuries from motor car accidents, 5; asphyxia by hanging, 2; peritonitis following perforation of uterus, 2; acute subtertian malaria, 3; rupture thoracic aortic aneurysm, 2; gun shot wound chest, 1.

GENERAL.

Staff.—The Pathologist was on leave on medical grounds from 29th April to 3rd June, during which time his duties were carried out by Drs. Macfie and Porter.

There has been no change in staff, which consists of one Pathologist, one Laboratory Assistant, one cleaner, and a part-time clerk. The large increase in work has meant, naturally, much more work for them, which they have done cheerfully and well. The bulk of the routine work has fallen to the Laboratory Assistant, Mr. N. Schizas, appreciation of whose excellent work I desire to record.

Meningitis.—In October the Inoculation Department of St. Mary's Hospital, London, offered to send out a bacteriologist to investigate the effects of the prophylactic vaccine, which was being used in the Island. Dr. I. H. Maclean arrived in the Island for this purpose on 3rd January, 1938, and the results of his investigations will be included in the Report for 1938.

APPENDIX D.

ANNUAL REPORT UPON THE WORK OF THE GOVERNMENT LABORATORY FOR THE YEAR 1937.

By H. Atkinson, *Government Chemist.*

The vacant post of Government Chemist has been filled by the appointment of Mr. H. Atkinson who assumed duties on the 2nd December, 1937. From the 1st January till 1st December, 1937, Mr. Loukis Haralambides acted as Government Chemist.

There was no other change or promotion of staff during the year.

The total number of samples analysed during the year was 1,462 as compared with 1,671 analytical samples in 1936.

The total analyses for the year 1937 and those of the previous decade are compared in Table I.

Table I.—Total Analyses made during the last Decade.

Year	*Total*	*Year*	*Total*
1927	1,850	1933	2,342
*1928	4,805	1934	2,355
†1929	1,713	1935	2,062
1930	1,546	1936	1,671
1931	1,812	1937	1,462
1932	2,428		

The samples for the year 1937 are divided into official and non-official samples and classified under the different headings shown in Table II and III.

Table II.
Official Samples.

Food and Drugs	776
Criminal	355
Waters	103
Agricultural and Industrial	5
Customs and Excise	7
Biochemical	3
Miscellaneous	200
Total	1,449

Table III.
Non-Official Samples.

Animal Viscera	7
Waters	4
Cloth	1
Ore	1
Total	13
Total Table II	1,449
Grand total	1,462

The samples falling under the different headings are considered in detail in the following sections.

1. Food and Drugs.

Table IV shows the total number of samples analyzed and the percentage of adulteration found within each of the 6 districts into which the Island is divided for the purpose of the administration of the Food and Drugs Law.

District	*Samples analysed*	*Genuine*	*Adulterated*	*% Adulterated*
Nicosia	242	231	11	4.5
Famagusta	111	108	3	2.7
Larnaca	95	83	12	12.6
Limassol	148	138	10	6.7
Paphos	110	104	6	5.4
Kyrenia	70	69	1	1.4
Total	776	733	43	5.5

The total number of 776 shows a decrease of 73 samples compared with the total of the previous year. The general adulteration rate of 5.5 per cent. shows a very small decrease compared with the 6.0 per cent. of the previous year's rate. The total number of food and drugs samples submitted for analysis is small and cannot be regarded as a representative for the Island, but examination of foodstuffs for conformity with standards laid down under the proposed new Regulations will call for much more detailed analyses, and it remains to be seen whether the present small staff will be able to cope with even this number of samples when the new Regulations are in force.

The figures indicate that adulteration is higher in Larnaca and Limassol Districts, and very low in Kyrenia.

The old practice of mixing coffee with roasted cereals and legumes is a favourite adulteration in the Colony. Another important article of food which is also frequently adulterated with different imported vegetable oil and fats is olive-oil.

The percentage of adulterated samples of milk was 22.6 compared with nil in the previous year. The total number of samples examined, however, is far too small for the figures to afford a measure of the quality of the Island's milk supply.

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* Includes 3,344 pathological samples.

† Includes 678 pathological samples.

Three samples of flour were found to be spoiled by smut, and two samples of bread were badly baked and had a dark blue colour, and a very bad smell and taste. All the samples of tinned stuff were found to be in a good condition, and the quality of imported vegetable oils and fats was fairy satisfactory.

The number of prosecutions brought before the Court was 29, and the fines inflicted amounted to £18. 12*s*. 0*p*.

Table V gives the total number of samples of each kind of foodstuff and drugs examined for the whole Colony, with the proportion of samples adulterated.

TABLE V.—FOOD AND DRUGS ANALYSED WITH PER CENT. ADULTERATION.

Sample	*Number*	*Adulteration*	*% Adulterated*
Flour	98	3	3.0
Bread	36	2	5.5
Biscuits	4	nil	nil
Rice	2	nil	nil
Milk	53	12	22.6
Condensed milk	18	nil	nil
Tea	26	nil	nil
Coffee	127	16	12.5
Olive-oil	86	10	11.6
Sesame oil	1	nil	nil
Tomato paste	35	nil	nil
Butter	7	nil	nil
Margarine	2	nil	nil
Cocoline	3	nil	nil
Vinegar	5	nil	nil
Cheese	16	nil	nil
Sugar	37	nil	nil
Salt	37	nil	nil
Sweets	4	nil	nil
Pepper	5	nil	nil
Pickles	1	nil	nil
Aerated waters	13	nil	nil
Sardines	68	nil	nil
Herrings	8	nil	nil
Sausages	2	nil	nil
Peas	1	nil	nil
Quinine	38	nil	nil
Aspirine	17	nil	nil
Castor-oil	5	nil	nil
Epsom salt	12	nil	nil
Laxative pills	2	nil	nil
Cocaine	4	nil	nil
Antipyrin	2	nil	nil
Phenacetin	1	nil	nil
Total	776	43	5.5

2. CRIMINAL INVESTIGATION..

A total of 355 exhibits were examined in connection with criminal cases, classified in Table VI.

TABLE VI.—CRIMINAL EXHIBITS.

Exhibits in murder and stabbing cases	129
Exhibits in rape and sodomy cases	8
Exhibits in poisoning cases, and poisons seized from unauthorized persons	83
Exhibits in arson cases	36
Exhibits in counterfeit coins	12
Exhibits in dangerous drugs	32
Exhibits in abortion cases	49
Exhibits in shopbreaking	6
Total	355

The number of exhibits submitted in 34 criminal cases shows a considerable increase compared with 144 exhibits in 36 cases of the previous year.

This increase appears to be due to the more scientific methods of investigation now employed by the Police, rather than to any increase in crime, and the work under this heading is likely to increase still more. As in the previous year the greatest number of exhibits arose in connection with murder cases, twelve of which were investigated.

Only one coin out of 12 submitted for analysis was found to be counterfeit. This consisted of tin.

In an arson case at Famagusta, petrol and calcium carbide were found.

In 32 exhibits sent from Famagusta, opium was identified.

In a human viscera sent from Kyrenia calomel and santonin were detected, and arsenic in an animal viscera sent from Paphos.

Expert evidence was given by the Chemist on nine occasions in the Magisterial and Assize Courts of the Colony.

3. WATERS.

Altogether 103 samples were examined of which 69 only were found to be chemically potable water supplies. The other 34 samples were found to be either saline or hard, or contaminated with organic impurities, or a combination of these.

4. CUSTOMS AND EXCISE.

Only seven samples were submitted for analysis including flour, oils and fats. One sample of oil on examination was found to be crude petroleum, and two samples of fat were found to be fish-oil. A black powder suspected to be opium was found to contain no opium or any other dangerous drug. One sample of flour was found to consist entirely of fine bran.

5. SCIENTIFIC EDUCATION.

The usual examination for the Government Certificate in Chemistry was held at the Laboratory on the 25th and 26th January. One candidate presented himself, who passed the examination and was awarded the Government Certificate.

6. OTHER DUTIES.

The Government Chemist acted as President on the following Boards of Survey: (*a*) Agricultural Stores ; (*b*) Veterinary Stores.

7. AGRICULTURAL AND INDUSTRIAL.

Five samples analysed under this heading consisted of imported wheat and flour. All these samples were found to be unfit for human consumption.

8. MISCELLANEOUS.

Under this heading a variety of samples not falling under the previous headings are dealt with.

Thirteen samples of alcohol were examined for the control of alcohol supply of the Medical Department.

Several samples of brackish waters from Phasouri and Akrotiri areas were submitted by the Rockefeller Foundation, Nicosia branch, to be tested for their salinity, and several samples of paris green were submitted for examination of their arsenic and moisture contents.

Different samples of stones and metals were analysed for the Museum for their composition, and several samples of foodstuff for Nicosia Hospital and Central Prisons. A sample of bread prepared from mixed flour was submitted for analysis by Nicosia Commissioner. This bread was found to be satisfactory.

A sample of powder submitted by the Director of Medical Services on examination was found to be cocaine.

Two samples of ore sent by the Inspector of Mines were analysed, one of which contained copper.

9. REVENUE AND EXPENDITURE.

Revenue.	£	*s.*	*p.*	*Expenditure.*	£	*s.*	*p.*
Government Chemist's fees ..	13	10	3	Chemicals and apparatus	165	12	2
Chemistry fees	2	0	0	Lighting, heating, etc. ..	39	7	3
Fines inflicted under the Food and Drugs Law	18	12	0				
Total	34	2	3	Total	204	19	5

10. VALUE OF WORK PERFORMED.

Category	*Amount* £	*s.*	*p.*
Food and Drugs	814	16	0
Criminal	745	10	0
Waters	432	12	0
Agricultural and Industrial	10	10	0
Customs and Excise	14	14	0
Biochemical	6	6	0
Miscellaneous	420	0	0
Total	£2,444	8	0

STAFF.

I have much pleasure in thanking the small staff of the Government Laboratory, in particular the Assistant Chemist, Mr. L. C. Haralambides, for their loyal assistance and co-operation.

APPENDIX E.

ANNUAL REPORT OF THE WORK OF THE INTERNATIONAL HEALTH DIVISION OF THE ROCKEFELLER FOUNDATION IN CYPRUS, 1937.

BY J. C. CARTER.

PERSONNEL.

Of the three International Health Division staff members assigned to Cyprus when the work was begun in 1936, only the writer remains. Dr. H. A. Barber, who initiated International Health Division activities in 1935 when he made a preliminary malaria survey of the Island and continued with special studies in 1936, was transferred to India early in the year. Dr. W. K. Stratman-Thomas left the Island in June of 1937, having resigned to accept a position elsewhere.

The personnel remaining, in addition to the representative of the International Health Division, consisted of:

Dr. M. Theodoulou, *Medical Officer*,
Mr. A. McLaughlan, *Assistant Engineer*,
Miss Kamer Yusuf, *Sanitary Inspector and Technician*,
Miss Eleftheria Tomazou, *Sanitary Inspector and Technician*,
Stellios Sotiriou, *Sanitary Inspector*,

whose salaries were paid by the Cyprus Government, and

Miss Margaret Passingham, *Secretary*,
Agathocles Neocleous, *Sanitary Inspector*,
Homer Proestos, *Sanitary Inspector*,
C. Vincent, *Chainman*,
Savvas Aresti, *Laboratory Assistant*,

who were paid from a budget provided by the International Health Division.

Mr. Mehmet Aziz and Miss Melahat Houloussi, Chief Sanitary Inspector and Sanitary Inspector and Technician, respectively, of the Cyprus Government, were also assigned by the Director, Medical Services, to assist the Bureau in a part-time capacity.

Miss Yusuf and Miss Tomazou successfully stood the Royal Sanitary Institute's examination for Sanitary Inspectors during the year and were awarded certificates.

RESUMÉ OF THE MALARIA SEASON.

During the summer and autumn, the statement that 1937 was a bad malaria year was frequently heard. This opinion was freely expressed by the villagers and members of the medical profession as well as by those associated with the efforts to control the disease.

A review of the statistics, based on data compiled from the malaria surveys made during the year, and which are believed to include a fair cross section of the malaria in each District, does not altogether confirm this view. Over the Island as a whole, the trend of the spleen rate was slightly downwards, falling from 34.4 to 32.7 per cent. On the other hand the malaria parasite rate was higher than in the preceding year, advancing from 34.4 to 41.1 per cent. This may manifest itself in the spleen rate during the coming year and bear out the opinion that an increase in transmissions, and acute malaria attacks, occurred in 1937.

Using only the fall surveys of 1936–1937, for purposes of comparison, the spleen rate in the Nicosia, Larnaca and Paphos Districts were less by 8.1, 11.7 and 1.8 per cent. respectively, while in the Limassol, Famagusta and Kyrenia Districts the rates increased by 1.0, 2.5 and 10.0 per cent. respectively.

The parasite index increased in all Districts except Larnaca where a decrease of 4.4 per cent. was recorded. The rise in the Nicosia, Limassol, Famagusta, Paphos and Kyrenia Districts was 10.8, 7.4, 3.8, 13.6, and 4.4 respectively.

The areas in which significant increases occurred are situated in rolling and hill country where *A. superpictus* is the vector. The explanation for the increase of malaria there is probably found in the rainfall statistics for the year. Though the total rainfall was only slightly higher than normal, the season was longer. Rains continued until the end of May with the result that a flow of water persisted in many hill streams until well into the summer, whereas, normally they would have been dry much earlier in the season. The same applies to springs which continued to flow for a much longer period.

Excess over normal rainfall has much less influence on *A. elutus* breeding places. These are mostly marshes and swamps which remain wet well into the breeding season following even a normal rainfall.

A serious increase of malaria occurred in some of the villages in the region contiguous to the outfall from the Kouklia reservoir, a strictly *elutus* area, but this was due to artificial causes and had no connection with the general situation. However, it probably explains the rise in the malaria rate for the Famagusta District taken as a whole.

The Kouklia reservoir was constructed to collect and store water flowing down from the hills through the Yiallias and Pedias rivers during the rainy season. Usually the reservoir is emptied in April as a result of an arrangement between the Directors of the Medical Services and Agricultural Department. This year, however, Government decided to retain the water in the reservoir through the summer and the Medical Department was so advised, together with the information that funds would be provided for controlling the area through the use of paris green, oil or other palliative measures which the Medical Department deemed suitable. Government was then warned by the Director of the Medical Services that though every effort would be made to prevent a serious outbreak of malaria in the surrounding villages, no assurance could be given to that effect.

It developed later, however, that the farmers would not utilize the water, contending that it was not suitable for crop irrigation and that it was injurious to the soil. Government thereupon issued instructions that the reservoir be emptied which was finally accomplished towards the middle of July. The damage had already been done, however, and though intensive palliative control measures had been started in a good many of the villages located along the outfall, several areas were flooded by a too rapid outflow from the reservoir and the problem became too large for the control gangs to successfully cope with. The greatest increase was recorded at Engomi where the spleen rate rose from 4.5 to 46.9 per cent. and the blood index from 7.1 to 69.8 per cent.

Kouklia, a village situated on the lake above the dam, showed an advance from 2.3 and 6.9, to 18.2 and 13.0 per cent., in spite of intensive control measures which were started early in the season and continued until the lake had been emptied.

There are three of these reservoirs in the Island, all of which are reported to be financial liabilities. If water is held in them through the summer months, which obviously must be done if the purpose for which they are maintained is fulfilled ; or if the emptying of them is delayed until well into the breeding season ; the experience related above might well become a chronic condition.

MALARIA AND MOSQUITO SURVEYS.

Spleen and Blood Surveys.—In 1937, 178 villages were surveyed (spring and fall), in which approximately 10,000 individuals, principally children, between the ages of one and fifteen years were examined. Spleen examinations were made by Dr. M. Theodoulou and classified according to Hackett's method.

Results of these examinations are given in the Table I.

Routine Anopheline Collections.—Catching stations were established in areas in which mosquito control operations are in progress, in locations having similar characteristics to the control areas for comparison purposes, and in areas where future mosquito control operations are envisaged.

Five stations are established in each village selected and each station consists of a dwelling-house and adjoining stable. These stations are located, one near the centre and one at each corner of the village. Collections are made weekly and a twenty-minute search devoted to each station (ten minutes in the dwelling and ten minutes in the stable).

The collected mosquitoes are sent to the laboratory at headquarters where they are identified and such of them as are required are used for dissections or any other purpose desired. Formerly, when dissections were not being done at the laboratory, the mosquitoes were counted and identified by the collector as they were caught, and immediately destroyed. Now it is required that all mosquitoes collected must be sent to the laboratory where they are counted and identified. This procedure insures a more accurate identification and is a check on the field activities of the collector.

SEASONAL TRANSMISSION OF MALARIA.

Mosquito Dissections.—Mosquito dissections were carried out from February until the middle of August when it became necessary to discontinue them to allow the laboratory staff to catch up with the examination of an accumulation of blood slides. About 8,000 slides had been allowed to accumulate—3,000 from the fall survey of 1936, and 5,000 from the 1937 spring survey.

The results of the dissections appear in the Table II where it is shown that 12,512 mosquitoes were dissected according to species as follows : *superpictus*, 6,363 ; *elutus*, 5,929 ; *bifurcatus*, 220. The first infected mosquito found was an *elutus*, collected at Asomatos (Limassol District) on 15th April ; another infected *elutus* was collected at Gaziveran (Syrianokhori area) on 22nd April. The first infected *superpictus* was from Kochati, collected on 8th May, and the second from Kalogrea (Kyrenia District) collected on 11th May. No infected *bifurcatus* were found among the 220 dissected.

Blood and Spleen Examination of Infants.—From March to September, 1937, monthly examinations of the blood and spleens of infants born after 1st November, 1936, were made in selected villages for the purpose of gathering information regarding seasonal transmission of malaria.

From the Table III it is seen that the first positive findings in the goup occurred during the May examinations when two infants were found to have parasites in their blood. One of these was 5 months and 25 days old when found positive on 5th May, while the other was 4 months and 16 days old and found positive on 15th May. There can be no assurance that the older infant was not infected soon after birth which occurred on 10th November, of the preceding year, though this is considered doubtful. There can be no doubt, however, about the younger infant which was born on 29th December, and the date of its infection, therefore, must have occurred not later than 3rd May.

Positive cases increased during each succeeding examination until at the end of the study in September, 40 of the 94, or 42.5 per cent., of the infants examined had become infected.

Anti-Larval Measures.

Ayios Epiktitos.—A demonstration of larval control by paris green application was undertaken at the village of Ayios Epiktitos. This village is located at the foot of the Kyrenia range and about 4 miles east of Kyrenia town. According to the 1931 census its population was 777, but it is now estimated at 850.

The controlled zone included all breeding places lying within a two-mile radius from the centre of the village. Streams having a total length of approximately 5 miles were dusted weekly with a mixture containing paris green and wood ash, 1 : 100, by volume.

As seen from the accompanying graph, anopheline control, judged by adult catching, was satisfactory. This was confirmed by weekly examination of the streams for breeding. On no occasion were larvae with development beyond second stage found, and those only rarely.

Paris greening of the streams was started on 5th May (though it should have been started 3 weeks earlier) and was continued until the middle of November. Adult catches in late May and early June indicated that breeding places were being missed. A thorough re-survey of the area was made and revealed that a series of springs at a point near the seashore and about ¾ of a mile from the village had been overlooked. After these were placed under control the catches were reduced to a satisfactory level and remained so for the remainder of the season. The rise which occurred in December was due to the cessation of the control work in November and is of no importance.

The spleen rate in the village showed a reduction, from 50.0 per cent. in 1936 to 38.2 per cent. in 1937, and the average spleen from 2.1 to 1.7 per cent. The parasite rate fell from 51.7 to 41.5 per cent.

Ayios Amvrosios.—Four mountain streams flow within easy flight range of this village and provide breeding grounds for *superpictus*. Experimental control measures were undertaken on the different streams as follows: stream (*a*) flushing; stream (*b*) semi-permanent tile drainage ; streams (*c*) and (*d*) paris green (dust method). Descriptions of the flushing arrangements and the semi-permanent tile drainage appear in the Engineering Section of the Report and will not be repeated here. Paris greening of streams (*c*) and (*d*) was carried out by the usual paris green—dust method applied to the water using a blower.

It is difficult to analyse the results of the mosquito control operations at Ayios Amvrosios as the devices for controlling breeding in the streams were not completed until the season was about half gone. The delay was due to the experimental work which had to be done before actual installations of the devices could be proceeded with.

Emphasis was directed more to a study of the means by which flushing could be accomplished, and how the water could be caused to flow beneath the surface of the stream bed, than to actual reduction of mosquito breeding.

However, as seen from the graph, collections from the regular catching stations in the village indicated a considerable reduction in the mosquito population.

Spleen and parasite rates in the school children increased from 41.9 to 60.0 per cent.; and from 36.4 to 40.4 per cent.

The experiments with the semi-permanent tile drainage and flushing, demonstrated that both methods can be successfully used in controlling *superpictus* breeding in the Cyprus mountain streams. In undertaking control of these streams on a large scale it is felt that a combination of the two methods might be productive of more stable results, and at no increase in expenditure over a period of years, than control by paris green or oil.

Limassol Salt Lake Area.—This project, which has been discussed in detail in previous reports, was expected to have been started during the season of 1937. This was not done, however, due to opposition to the scheme by the residents of one of the villages (Akrotiri) in the area who contended that drainage of the marshes would destroy their livelihood by killing off the existent growth of reeds with which they manufacture baskets. Government undertook an investigation of this complaint which had not been completed until it was too near the approach of the rainy season to commence the construction work. As a result of this delay the funds which the I.H.D. had contributed toward the cost of the scheme for 1937 were allowed to lapse. No provision was made in the subsequent budget to assist with this project and it is left strictly up to Government to provide the funds if drainage of this important area is accomplished.

SPECIAL STUDIES.

Flight Range of A. elutus.—Little definite knowledge was available in Cyprus regarding the flight range of *A. elutus* and *A. superpictus*, the two anophelines which are generally conceded to be the Island's principal malaria vectors. As such knowledge is essential to properly organize control activities it was decided to conduct experiments in an attempt to throw light on this subject.

A layout, affording admirable natural conditions for conducting the experiment with *A. elutus*, existed in the Salt Lake Area near Limassol. Enormous numbers of this species are regularly produced in the nearby marshes to furnish an abundance of mosquitoes for the experiment, and a number of villages are scattered about the district providing convenient catching stations at almost any desired distance from the liberating point.

On the morning and evening of 6th June, and on the morning of 7th June, a Sanitary Inspector assisted by a Sanitary Labourer, collected about 17,000 mosquitoes (approximately 99 per cent. *elutus* and the remainder *superpictus*) from a house and a stable located near the edge of the marsh and within about 300 yards of the point where the mosquitoes were subsequently released after having been stained. When captured the mosquitoes were placed in cages, 12″×12″×12″, which were kept covered to exclude light, and placed in a cool and damp part of the building until ready to be stained. Throughout the catching and staining operations great care was taken to injure and disturb the mosquitoes as little as possible.

The collections were completed at about 10.30 in the forenoon and at 1.30 p.m. staining was started. A two per cent. aqueous solution of Eosin Y (Arthur H. Thomas and Co.) was sprayed upon the mosquitoes from all sides of the cage using a small atomizer of unknown manufacture which was purchased from a local barber shop. The staining of the six cages of mosquitoes occupied about 30 minutes, after which they were returned to the resting place in the building and allowed to dry.

At about 7 p.m. (sundown) they were carried to a spot about 30 yards inside the marsh and released. Prolific natural breeding was taking place in the marsh at the point where the mosquitoes were released and a number of *elutus* larvae were collected while waiting for the mosquitoes to leave the cages. The marsh was covered with a lush growth or reeds extending to a height of about 4 feet above the surface of the water. It was noticed that when the cages were held waist high, or above, the mosquitoes upon leaving flew upwards and away, and when held lower than the waist the mosquitoes dispersed into the reeds on all sides, usually in a downward direction. The air was calm at the time of release and no motion of the vegetation was evident.

30 live mosquitoes which remained in the cages were taken to the laboratory and examined on the following day. All were eosin positive, large dots of the dye being visible on the wings, legs and bodies of the mosquitoes under a low power lens. A goodly number of dead mosquitoes were also found in the cages. These were counted and identified: 3,898 were *elutus* and 50 were *superpictus*. This means that about 13,000 mosquitoes were released on 7th June.

On 16th June another lot of about 10,000 mosquitoes were released at the same spot after having been caught and stained in the same manner as the first. Altogether, therefore, some 23,000 stained mosquitoes were released during the experiment.

Collections were made on 8th June, and subsequently every second day, from pre-determined catching stations located in villages surrounding the liberating point, at distances ranging from 300 yards to 4.3 miles.

The mosquitoes, immediately upon being captured, were placed in boxes which were plainly marked with the name of the village and the number of the station, and sent to the laboratory at Nicosia the same day. Here they were examined as soon after arrival as possible, usually the following morning, according to the following procedure:

The mosquitoes from each of the boxes (one box only being opened at a time) were arranged in rows on a fresh and unsoiled sheet of white blotting paper and counted and identified. Using a pipette, one or two drops of the solvent was then applied directly on the mosquito. The stain thus washed through on to the white blotting paper was easily visible. All positive findings from the first three collections and all other cases which appeared doubtful, were confirmed by direct observation of the stain on the mosquito under the microscope. When this confirmation could not be made the mosquito was recorded as negative. The formula for the solvent used is :—

Glycerine	3 parts
Methyl alcohol	3 parts
Chloroform	1 part

The results of the collections and examination of the mosquitoes, and distances of the various catching stations from the liberating point are given in the Table IV.

No wind velocities were taken as it was not possible to procure an anemometre. It was observed, however, that during the experiment winds were more or less normal which is south-west to north-east. The maximum wind velocity which occurred during the experiment is estimated at about 12 miles per hour. The wind usually rises in the late morning and continues until just before sundown when it drops.

The mosquito population in many of the catching stations was enormous and many of these had no doubt been present when the experiment started. The chances of a collector picking up a stained one from among thousands of mosquitoes resting in a station, only a small portion of which are collected, must have been small. In view of this the number of recaptured mosquitoes (33) is considered very satisfactory.

The experiment demonstrated that *A. elutus* is capable of travelling a distance of at least 4.3 miles, but does not exclude the possibility that they may be able to travel further distances.

The original intention to conduct similar flight experiments with *A. superpictus* unfortunately had to be abandoned due to pressure of other duties. The importance of this knowledge is recognized, however, and it is hoped to make such an experiment in 1938.

SANITATION.

Feeling that the sanitation of a typical village in which latrines could be demonstrated would help in making the Cypriot latrine conscious, the Director of the Medical Services requested the International Health Division to undertake such a demonstration. He felt confident that if such a demonstration were made it would enable him to conduct similar work in other villages.

The I.H.D. acted favourably upon the request and appropriated the sum of £150 for the purpose. The village of Dheftera situated 9 miles south-west of Nicosia was chosen by the Director for the demonstration, and bored-hole latrine was selected as being the most suitable type. Work was commenced on 11th October and latrines installed in 167 houses of the 237 in the village.

Before starting the installation of latrines the question of their proximity to water wells was settled and a minimum distance of 60 feet between well and latrine arbitrarily fixed. 70 houses possessing wells and with insufficient space in which to install a latrine the required distance away were left unsanitated. There is a movement on foot to provide these houses with water from other sources and close the wells. If this is done, the Medical Department will then install latrines in the unsanitated houses.

The latrines were bored with an auger in the usual way, to a depth of 20 feet and capped with a reinforced concrete squatting slab supported upon a concrete collar at the mouth of the hole. No housing was provided, this being left to the owner of the property to do.

The soil encountered in the bores was a strata of clay for the first 10 to 15 feet and then a strata of large gravel which continued beyond the depth of the hole. The clay made it unnecessary to line the holes and the large gravel at the bottom should be an advantage in permitting percolation of the latrine contents. None of the holes entered the water table and are consequently dry. It will be interesting to see how long they will serve the average family before requiring evacuation.

The total cost of sanitating the village, including about £22 for the purchase of boring equipment, was £143. 6*s*. 3*p*., or 14*s*. 7*p*. per latrine.

ENGINEERING REPORT, 1937.

By J. C. Carter and A. McLaughlan.

The following engineering works and surveys in the field were carried out :—

(*a*) Repairs to the drainage works in the Yiallias river at Pyroi.
(*b*) Drainage of the Yiallias river at Kochati.
(*c*) Anti-malaria works in the streams of the Kyrenia District.
(*d*) Experimental pipe making for the drainage of the Kyrenia streams.
(*e*) Sanitation of Dheftera village by means of bore-hole latrines.

Drainage Works in the Yiallias River at Pyroi.—The original scheme was carried out in 1936, and consisted of a 12-inch diameter concrete pipe line one mile in length laid at a depth of approximately 3 feet in the gravel beds of the river, and resulted in the complete drainage of surface water lying in the river bed. During the winter of 1936 the storm flow in the river caused several breaches in the pipe line, particularly at bends in the river, with the result that the pipe line in the vicinity of the breaches was completely filled up and flow was arrested.

In the spring of 1937 repair works on the pipe line were commenced and various types of sewer rods were used in attempting to remove the obstructions. All of them, however, proved of no avail, and finally those sections of the pipe line in which silt, gravel and stones had been deposited were taken up, cleaned and relaid. On the 21st May, while the repairs were being carried out, a flood, due to late rains, occurred and 80 feet of pipe line in a canal which had not yet been refilled was carried away. The cost of the work done in reinstating the pipe line was £85. The river was rendered completely dry by the end of July, 1937.

In the autumn of 1937 the storm flow of the river again caused breaches in the pipe line in the same places as in 1936, namely at curves in the river bed. It has been decided, therefore, that in all future drainage works of this type the following practices will be adopted :—

(*a*) The alignment of the pipe line at curves in the river bed will be on the inside of the curve. and will follow a line set back 50 feet from and parallel to the bed of the inner curved bank of the river bed.
(*b*) The minimum amount of cover to the pipe line where it crosses the river bed to be not less than 5 feet.

During 1938 repairs and alterations will be carried out on the Pyroi pipe line by deviations at curves in the river bed. It is anticipated that in accordance with the practice mentioned above these measures will safeguard the pipe line permanently from the winter flow of the Yiallias river.

Drainage of the Yiallias River at Kochati.—The village of Kochati, inhabited by approximately 300 people, lies on the banks of the Yiallias river, and during the spring, summer and autumn is infested with anopheline mosquitoes, and consequently has a high malaria rate. The abundance of mosquitoes is attributed to the water in the river which flows throughout the year and provides ideal breeding grounds for anopheline mosquitoes. It was decided, therefore, to drain the Yiallias during 1937 for a distance of one-half a mile upstream and one-half a mile downstream of Kochati village.

In the spring a reconnaisance survey of the mile of the river to be drained was carried out, and it was thought that drainage by means of an open jointed pipe line, as used at Pyroi, would prove the most effective. In July a detailed topographical levelling and survey of the river bed was carried out.

The survey revealed the following :—

(*a*) The path of the river bed in which winter flow took place was most irregular and consisted of many acute bends.
(*b*) The fall in individual stretches of the bed varied from 5 feet in 1,000 to 20 feet in 1,000, and consequently the scouring action due to the high velocity of flow in some of these stretches could prove dangerous to the security of the pipe flow.
(*c*) The average fall over a length of 4,500 feet of the river bed was approximately 7.5 feet in 1,000.

Having regard to the high velocity of flow mentioned in (*c*) above it was decided that any surface drainage works in this river would be destroyed by the winter flow, and that the safest method of drainage would be by means of an open jointed subsoil pipe line.

Working levels for a subsoil pipe line were taken and a drainage scheme prepared. The details of the scheme are as follows :—

(*a*) The location of the pipe line to be as far as possible outside the river bed in order to avoid the extra amount of pipe line involved in following the devious path of the river.

(*b*) The location of the pipe line at points where the river is crossed to collect subsoil water to be on selected straight stretches of river bed when the velocity of flow is likely to be low.

(*c*) The minimum covering to the pipe line to be 5 feet of gravel and large shingle.

(*d*) The grade of the pipe line to be 3 feet in 1,000. As this grade is not as steep as the average grade of the river bed, the pipe line tends to have less covering the further it is produced downstream. It is not possible to grade the pipe line from inlet to outflow at an even and continuous grade on account of: firstly, the fixed elevation of the three selected points where the pipe line would cross the river; and secondly, to the deep excavation that would be entailed on the lengths of the pipe line laid outside the river bed when considering the difference in elevation between the river bed and the adjacent land.

(*e*) At points in the pipe where, due to the grade of 3 feet in 1,000, the pipe line tends to have a covering less than the minimum, a drop box should be provided in order to lower the adjacent downstream length of pipe the required distance. This procedure is repeated throughout the scheme.

(*f*) At all changes of direction in the alignment of the pipe line a reinforced concrete box, combined with silt box, should be provided to effect connection of the two arms of the pipe line.

(*g*) Where the pipe line passes under the river a reinforced concrete drop box should be provided at a point 50 feet short of the bank of the river in order to lower the pipe line, which passes under the river, sufficiently to ensure a covering of at least 5 feet.

(*h*) Concrete pipes to be 12 inches in diameter with 1½ inch walls similar to those used at Pyroi—*see* Annual Report, 1936.

On the 23rd July the work in draining the river at Kochati was put in hand. The pipe making was carried out by piece work and the excavation of the trench to take the pipes, and the laying of the pipes was carried out by contract. The work was completed on the 30th October at a cost of £232. 9*s.* 0*p.*

The length of pipe line laid was 1,143 yards, and the cost per yard run worked out at 4*s.* This figure does not include charges for supervision.

During November after heavy rain the river came down in full flood several times. After each flood a careful inspection of the pipe line and catch pits was made, and no breaches in the pipe line or silt in the catch pits were apparent. Approximately one week after the floods the river bed in which the pipe line was laid was completely dry which indicates that the floods have not damaged or interfered with the pipe line.

Anti-Malaria Works in the Streams in the Northern Area of the Kyrenia District.—The northern area of the Kyrenia District is a narrow strip of broken country bounded on the north and west by the sea, on the south by the Kyrenia range of mountains, and on the east by the Akanthou road. It is cut up by many deep gorges which conduct the winter rainfall to the sea. In many of the gorges the flow is continuous throughout the year in the form of small streams, and in the spring, summer and autumn profuse anopheline breeding, principally *superpictus*, occurs. The villages most affected by malaria are Ayios Amvrosios, Kalogrea, Kharcha, Ayios Epiktitos, Trimithi and Ayios Yeoryios.

Early in 1937, a survey of the streams in which flow takes place during the breeding season, was carried out with a view to ascertaining the length of streams to be controlled and subsequently to put in hand experimental drainage works and palliative anti-malaria measures in order to control all streams within a one-mile radius of the villages most affected by malaria. A diagrammatic plan of the streams was prepared incorporating all the information revealed by the survey.

The streams may be classified in groups as follows, and the streams in each group are situated within one mile of the village which carries the group name :—

(1) The Trimithi Group.
(2) The Ayios Epiktitos Group.
(3) The Platymatis Group.
(4) The Ayios Amvrosios Group.
(5) The Kalogrea Group.
(6) The Kharcha Group.

It was decided to control Groups (2) and (3) by palliative measures. Group (4) by draining and flushing, and Groups (1), (5) and (6) to remain as comparison stations.

The streams in the Ayios Epiktitos Group and the Platymatis Group were treated once a week by paris green mixed with ashes. The results proved very satisfactory. The reason for controlling the Platymatis Group is that many of the people of Ayios Amvrosios are resident at Platymatis during the harvest season.

The Ayios Amvrosios Group, which consists of six streams, was controlled by means of: (*a*) flushing, (*b*) semi-permanent subsoil pipe lines, and (*c*) paris greening.

Experimental Flushing of the Kaloyeros River.—The Kaloyeros stream of the Ayios Amvrosios Group was selected for experimental larvae control by flushing. The bed of this stream is steep, on the average about 3 feet wide, and, in the most parts, covered with dense vegetation. It is situated about one quarter of a mile from Ayios Amvrosios. The length wet in summer is approximately one mile. The summer flow of water in this stream is small and much of it used for irrigation of garden land on each side of the stream. In order to impound water with which to flush the stream, a dam was constructed half way up the length of the stream to form a reservoir. The dam is 32 feet 6 inches long and 5 feet 6 inches high, and is built of masonry in lime mortar pointed in cement, and impounds approximately 2,000 cubic feet of water. A large opening in the dam was provided in which a steel gate, capable of sliding vertically upwards in a steel channel frame when pulled up by hand, was fixed. By means of the gate the reservoir can be emptied in 1½ minutes.

The cost of the dam is £24. 14*s.* 4½*p.* and is unnecessarily high, but, having regard to the fact that it was to be used for experimental purposes upon which the success of future larval control of this type depended, it was considered that only the best type of workmanship and appliances should be used.

The effective flushing range of the water in the reservoir was determined by carrying out repeated experimental flushings of the stream with a view to locating the position of additional reservoirs. During the flushing the surge of water discharged from the reservoir, as it proceeded downstream, was kept under close observation, and, at the point where the velocity had decreased to such an extent that it was not likely to cause larval destruction, a site for an additional reservoir was located. As soon as the surge of water had died away larval searches were made at this point and for some distance upstream to determine if any larvae existed which had not been effected. The effective flushing range of the reservoir was found to be approximately 400 yards.

Three additional reservoirs of inexpensive construction were provided, two upstream of the experimental dam and a third downstream, by constructing dams across the stream. These dams consist of substantial masonry walls in plain mud mortar pointed with cement with a clay cone. A wide wooden gate, operated by hand and opening vertically, is provided to discharge the water as rapidly as possible. The cost of the three reservoirs was £12. 17*s.* 4*p.*

The flushing is carried out twice a day, once a week in two surges at 3-minute intervals. The actual procedure adopted in flushing the Kaloyeros stream, having regard to the scarcity of water, is as follows ; for purposes of this Report the reservoirs will be numbered 1 to 4 commencing with the extreme upstream reservoir :—

1st flushing :

(*a*) Fill reservoirs No. 1 and No. 3.

(*b*) Close gates of reservoirs No. 2 and No. 4.

(*c*) Release one-half the quantity of water in No. 1 reservoir, *i.e.* first surge of water.

(*d*) 3 minutes after having performed (*c*) release all water in reservoir No. 1, *i.e.* second surge of water.

(*e*) Proceed to reservoir No. 2 and await arrival of first surge of water.

(*f*) When reservoir No. 2 is one-half full and first surge appears to have subsided, release water until reservoir is empty. Then close gates.

(*g*) Await arrival of second surge at reservoir No. 2 and repeat (*f*).

(*h*) Proceed to reservoir No. 3 and release two-thirds of the quantity of water therein, *i.e.* first surge of water.

(*k*) 3 minutes after having performed (*h*), by which time the water from reservoir No. 1 will have arrived at No. 3 and will have filled it, release total quantity of water, *i.e.* second surge of water.

(*l*) and (*n*) The same procedure is applied to reservoir No. 4.

2nd flushing : For the second flushing repeat operations (*a*) to (*n*). The cost of operating the reservoirs amounts to one day's labour per week which is two shillings.

The accompanying diagram shows various larval surveys carried out in the Kaloyeros stream one day after it had been flushed. The first three surveys were carried out after the stream had been flushed with two surges by means of reservoirs No. 1, 3 and 4 only, and the fourth survey after two flushings with two surges through the four reservoirs. The diminution in the number of larvae between reservoirs No. 2 and No. 3 is attributed to the reservoir No. 2, and the general diminution throughout the length of the stream to the two flushings in two surges.

Drainage of Kamenos River by semi-permanent Pipe Line.—The Kamenos stream of the Ayios Amvrosios Group was selected for experimental drainage by means of a temporary pipe line. The nature of the stream bed consisted of a mixture of large gravel and sand, and comparatively few large rocks which would impede pipe laying. It is situated about three-quarters of a mile to the west of Ayios Amvrosios and has a steep and narrow bed. The length of stream bed in which water flows during the spring, summer and autumn is approximately 1½ miles.

The pipe line consists of 4-inch diameter earthenware pipes, laid in most cases with the surface of the pipes at stream bed level. The ends of the pipes were fitted together in order to afford open joints through which the water could enter the line, so that the total flow could be confined therein.

The laying of the pipes is a very simple and inexpensive work and may be roughly summarized as follows :—

(*a*) A rough channel following the alignment of the flow in the stream is formed by scooping out soil with a hoe. The size of the channel should be large enough to accommodate the pipe, and is usually about 6 inches wide and 4 inches deep. The soil scooped out is heaped on the side of the channel.

(*b*) Pipes are laid in the channel with their ends abuting through which the water enters the line. Care should be taken that two adjacent pipes should have their invert as near the same elevation as possible, and the longitudinal alignment should be as nearly straight as possible. Where the alignment of the line has to describe a curve, the curve should have as big a radius as possible.

(*c*) After the pipes have been laid the soil axcavated in forming the channel should be packed against the sides of the pipe line, and any surplus soil may be spread out over the stream bed to fill depressions, or placed on top of the pipe line.

(*d*) It is not necessary to confine the flow of water in places where cataracts occur in the stream bed. The water in such places is usually so turbulent that breeding will not occur. Filling may be resorted to in extreme cases, or the pool controlled with paris green.

The length of pipe line laid in the Kamenos stream was 6,264 feet at a cost of £54. 5*s*. 6*p*.

During the winter the streams in the Kyrenia District accommodate large quantities of flood water derived from heavy rainfall, and, as the streams are steep and narrow, the velocity of flow may be sufficiently great to cause the displacement of any pipes laid near the surface of the stream bed. It was decided, therefore, that the pipe line laid in the Kamenos stream would be taken up by the 1st of October, and relaid in the following spring.

Experimental Pipe Making for the Drainage of the Kyrenia Streams.—Having regard to the poor quality of clay pipes on the local market, it was thought that a better and stronger pipe, similar to those made at Pyroi but of smaller diameter, could be made equally well.

With this view in mind experiments were conducted in manufacturing concrete pipes to the following specification :—

(*a*) Diameter of pipe to be between 4 and 5 inches.

(*b*) Walls of pipe to be between ½ inch and ¾ inch thick.

(*c*) Length of pipe to be 1 foot.

(*d*) Pipe to be light.

(*e*) Pipe to withstand a pressure of 400 pounds distributed over 3 inches of its length.

(*f*) Cost of pipe not to exceed 1½ piastres per linear foot which is the price of the clay pipe available on the market.

A plan and specification of a suitable pipe mould provided with two inner casings of different diameters was prepared, and the mould made.

Experimental pipe making and testing was carried out at headquarters, Nicosia. Various mixtures of cement mortar were used with varying contents of cement, sand and water. Four pipes of each kind were made, and it was found, after testing them, that the use of various grades of sand and alterations in the water had practically no effect on the strength of the pipe, and that, provided the sand was clear, the factor governing the strength of the pipe was the cement content.

The results of the pipe testing show that the pipe with ½ inch walls made out of a mixture of 1 part cement and 2 parts sand satisfies the requirements of the specification, and will be adopted for future drainage works in the streams.

The cost of constructing one linear foot of the above pipe is estimated from the actual experiment to be one piastre.

TABLE I.—RESULTS OF SPRING AND FALL SURVEYS—1937.

DISTRICT		SPLEEN INDICES										BLOOD INDICES						
		O	P	I	II	III	IV	No. Exam.	No. Pos.	% Pos.	Av. Spl.	V	F	M	Mix.	No. Exam.	No. Pos.	% Pos.
Nicosia	Spring	1,036	117	149	88	29	—	1,419	383	26.9	1.5	139	84	65	15	1,352	303	22.4
	Fall	749	97	188	154	40	3	1,231	482	39.2	1.9	157	404	55	37	1,138	653	57.4
Larnaca	Spring	579	20	32	2	—	—	633	54	8.5	1.1	31	15	13	—	603	59	9.8
	Fall	241	12	20	8	—	—	281	40	14.2	1.3	18	37	4	5	272	64	23.5
Limassol	Spring	638	71	106	70	60	4	949	311	32.8	1.8	89	55	66	3	841	233	27.7
	Fall	1,060	81	125	49	11	—	1,326	266	20.1	1.4	108	187	55	24	1,238	374	30.2
Famagusta	Spring	557	15	10	1	—	—	583	26	4.5	1.0	14	6	4	—	553	24	4.3
	Fall	641	35	29	7	—	—	712	71	9.9	1.2	62	25	8	7	709	102	14.4
Paphos	Spring	55	14	42	46	29	—	186	131	70.4	2.9	28	21	59	8	183	116	63.4
	Fall	151	73	180	126	47	4	581	430	74.0	2.7	65	278	65	43	566	451	79.6
Kyrenia	Spring	458	115	135	110	25	4	847	389	45.9	2.0	92	110	36	10	768	248	32.3
	Fall	177	57	96	93	37	3	463	286	61.8	2.5	61	122	19	8	449	210	46.7
Total	Spring	3,323	352	474	317	143	8	4,617	1,294	28.0	1.6	393	291	263	36	4,300	983	22.8
	Fall	3,019	355	638	437	136	10	4,594	1,575	34.3	1.8	471	1,053	206	124	4,372	1,854	42.4
Grand Total ..	Spring & Fall	6,342	707	1,112	754	278	18	9,211	2,869	31.1	1.7	864	1,344	469	160	8,672	2,837	32.6

Percentage of Species.

	V	F	M	Mix.
Spring	39.9	29.6	26.7	3.7
Fall	25.4	56.8	11.1	6.7

TABLE II.—MOSQUITO DISSECTIONS—1937.

Month	*A. Superpictus*						*A. Elutus*						*A. Bifurcatus*						ALL SPECIES (TOTALS)					
	Glands			Stomachs			Glands			Stomachs			Glands			Stomachs			Glands			Stomachs		
	No. dsctd.	No. Pos.	% Pos.	No. dsctd.	No. Pos.	% Pos.	No. dsctd.	No. Pos.	% Pos.	No. dsctd.	No. Pos.	% Pos.	No. dsctd.	No. Pos.	% Pos.	No. dsctd.	No. Pos.	% Pos.	No. dsctd.	No. Pos.	% Pos.	No. dsctd.	No. Pos.	% Pos.
January	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
February	320	—	—	—	—	—	174	—	—	—	—	—	7	—	—	—	—	—	501	—	—	—	—	—
March	724	—	—	318	—	—	409	—	—	97	—	—	11	—	—	3	—	—	1,144	—	—	418	—	—
April	825	—	—	316	—	—	1,392	2	0.1	509	—	—	88	—	—	49	—	—	2,305	2	0.08	874	—	—
May	1,250	4	0.3	1,020	1	0.09	1,637	2	0.1	1,282	2	0.1	83	—	—	64	—	—	2,970	6	0.2	2,366	3	0.1
June	1,315	15	1.1	786	5	0.6	1,480	23	1.5	1,071	3	0.2	28	—	—	12	—	—	2,823	38	1.3	1,869	8	0.4
July	1,335	39	2.9	477	8	1.4	484	12	2.4	307	2	0.6	2	—	—	—	—	—	1,821	51	2.8	784	10	1.2
August	594	7	1.9	167	—	—	353	2	0.5	166	1	0.6	1	—	—	—	—	—	948	9	0.9	333	1	0.3
				Dissection interrupted on 15th August																				
Total	6,363	65	1.0	3,084	14	0.4	5,929	41	0.7	3,432	8	0.2	220	—	—	128	—	—	12,512	106	0.8	6,644	22	0.3

TABLE III.—SEASONAL TRANSMISSION OF MALARIA.

*Blood Examination of Infants under One Year of Age.**

Age in Mos.	MARCH				APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
	No. Exam.	Positive		Period of Exposr.	No. Exam.	Positive		Period of Exposr.	No. Exam.	Positive		Period of Exposr.	No. Exam.	Positive		Period of Exposr.	No. Exam.	Positive		Period of Exposr.	No. Exam.	Positive		Period of Exposr.	No. Exam.	Positive		Period of Exposr.
		No.	%			No.	%			No.	%			No.	%			No.	%			No.	%			No.	%	
1	14			March	3			April	7			May	3			June	1			July	2			Aug.	1			Sept.
1	30			Feb.	15			March	13			April	9			May	6			June	1	1	100.0	July	3			Aug.
2	30			Jan.	16			Feb.	16			March	16	4	25.0	April	7	1	14.3	May	3	1	33.3	June	2	1	50.0	July
3	22			Dec.	16			Jan.	34			Feb.	13	2	15.4	March	18	4	22.2	April	9	3	33.3	May	5	2	40.0	June
4	22			Nov.	22			Dec.				Jan.	14			Feb.	9	1	11.1	March	15	7	46.7	April	6	3	50.0	May
5					26			Nov.	50	2	4.0	Dec.	11			Jan.	21	6	28.6	Feb.	6	1	16.6	March	13	3	23.1	April
6									26	2	7.7	Nov.	15	2	13.3	Dec.	21	4	19.0	Jan.	23	6	26.1	Feb.	10	2	20.0	March
													12	1	8.3	Nov.	21	7	33.3	Dec.	18	7	38.9	Jan.	13	6	46.1	Feb.
																	19	8	42.1	Nov.	19	6	31.6	Dec.	14	6	42.8	Jan.
																					23	8	34.8	Nov.	12	8	66.7	Dec.
																									15	9	60.0	Nov.
	118	—	—		98	—	—		146	4	2.7		93	9	9.7		123	31	25.2		119	40	33.6		94	40	42.5	

* Monthly Surveys in 32 villages: 11 in Nicosia District; 9 in Limassol District; 7 in Kyrenia District; 5 in Paphos District.

(Only Infants born after 1st November of previous year are included.)

TABLE IV.—FLIGHT EXPERIMENT. (*A. elutus.*)
(Catching Record.)

Distance from liberating point ..	Phassouri		Assomatos		Trakhoni		Kolossi		Akrotiri		Episkopi		Erimi		Ypsonas		Zakaki	
	0.7 Mi.		1.4 Mi.		2.3 Mi.		2.3 Mi.		2.5 Mi.		2.8 Mi.		3.0 Mi.		4.0 Mi.		4.3 Mi.	
DATE	No. Col.	No. Pos.	No. Col.	No. Pos.	No. Col.	No. Pos.	No. Col.	No. Pos.	No. Col.	No. Pos.	No. Col.	No. Pos.	No. Col.	No. Pos.	No. Col.	No. Pos.	No. Col.	No. Pos.
June 8	173	—	580	—	194	—	369	—	1	1	243	—	21	—	—	—	26	—
June 9	—	—	2,039	106*	—	—	660	1	3	—	480	2	28	—	—	—	—	—
June 10	104	1	1,388	4	421	1	—	—	—	—	—	—	—	—	—	—	41	—
June 11	—	—	—	—	—	—	800	2	—	—	453	—	56	—	1	—	—	—
June 12	152	—	1,350	—	333	1	—	—	—	—	—	—	—	—	—	—	70	—
June 13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
June 14	—	—	—	—	—	—	629	1	—	—	392	1	57	—	4	—	—	—
June 15	—	—	889	—	381	—	—	—	7	—	—	—	—	—	—	—	89	1
June 16	—	—	—	—	—	—	308	—	—	—	192	—	22	—	3	—	—	—
June 17	71	1	480	—	204	1	—	—	8	—	—	—	—	—	—	—	52	—
June 18	—	—	—	—	—	—	138	1	—	—	136	1	27	—	—	—	—	—
June 19	147	1	827	2	87	1	—	—	5	—	—	—	—	—	—	—	53	—
June 20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
June 21	—	—	—	—	—	—	264	3	—	—	262	—	33	2	4	—	—	—
June 22	225	—	1,411	—	—	—	—	—	9	—	—	—	—	—	—	—	29	—
June 23	—	—	—	—	—	—	175	—	—	—	148	—	24	—	2	—	—	—
June 24	103	—	1,028	1	—	—	—	—	10	—	—	—	—	—	—	—	27	—
June 25	—	—	—	—	—	—	151	1	—	—	127	—	15	—	—	—	—	—
June 26	78	—	625	1	67	—	—	—	5	—	—	—	—	—	—	—	29	—
June 27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
June 28	—	—	452	—	16	—	109	—	7	—	67	—	20	—	—	—	—	—
June 29	—	—	211	1	—	—	15	—	—	—	7	—	—	—	—	—	—	—
			11,280 2,039	115 106*														
Total ..	1,053	3	9,241	9	1,703	4	3,618	9	61	1	2,507	4	303	2	14	—	416	1

Note: Mosquito Liberations:—June 7..13,000
June 16..10,000

Total .. 23,000

Total number mosquitoes collected : 18,916
Total number stained mosquitoes recovered .. 33 (all *elutus*).

* Eliminated from findings—Blotting paper used was found to have been previously used and contained traces of red ink.

APPENDIX F.

SOCIAL WORK, 1937.

By Ethel F. Passingham, *Honorary Social Worker.*

Social Hygiene Council.

The Social Worker paid many visits to the "Mana" Society Day Nursery, the Turkish Benevolent Society, Nicosia, the Day Nursery and Poor House, Limassol.

The "Mana" Society Day Nursery has been arranged for the children of working Orthodox-Christian mothers and is now housed in the building originally used as an infants' department of one of the elementary schools in Ayios Kassianos, Nicosia. Between 50 and 60 children of pre-school age attend daily.

The children attend the Infant Welfare Clinic at the Government Hospital each month. A daily supply of milk is provided from the Government Farm at Athalassa. Though a charge of one piastre per child per day is made the organization depends chiefly for funds on the charitable endeavours of its Committee. The children are given kindergarten instruction and provided with two meals each day.

A similar organization in the Turkish Quarter, called Yardimji Analar Kurumu, is arranged by Madame Midhat and her helpers for the protection of poor Moslem children. In the Day Nursery the attendance is 16.

These two organizations are to be commended for the voluntary effort of caring for, and providing training for, children who would otherwise be running the streets of Nicosia.

Talks.

The Hon. Social Worker gave moral and health talks during the year to the Young Women's Christian Association, the Shakespeare School, Nicosia, and St. Joseph's Convent School, Nicosia.

Cyprus Delegate to the Eighth Imperial Social Hygiene Congress.

The Hon. Secretary attended the above Conference held in London and spoke on behalf of Cyprus. She subsequently prepared a report of 158 pages dealing with all the aspects of Social Welfare and Health Education dealt with by the Conference.

Infant Welfare.

An Infant Welfare Clinic which has been established in Kyrenia, and the "Mana" Society, Nicosia, are now officially recognized by the Cyprus Social Hygiene Council.

Publications.

A special pamphlet entitled *The Duties and Responsibilities of Parents with regard to Sex Education*, prepared by the Hon. Secretary and based on a lecture previously given to women's clubs in Nicosia, was widely distributed, by special request, to teachers and others.

"Cyprus Public Health."

The publication of *Cyprus Public Health* (5,000 copies monthly) in three languages was continued in 1937 with the exception of July, August and September. Copies of this publication are sent to all Elementary and Secondary Schools, the Commissioners, Mukhtars, Mayors, and all persons who have sent a donation of 5*s.* and upwards to the League. The pamphlet is also sent in exchange to the principal Colonies of the British Empire, to the United States of America, Greece, Turkey, etc. Many appreciative letters referring to the educational value of the pamphlet were received.

Cyprus Anti-Tuberculosis League.

Much work was done in connection with the League, of which His Excellency the Governor is Patron, Mr. A. B. Wright, C.B.E., M.C., Colonial Secretary, Vice-Patron, and Dr. E. A. Neff, President. The Council includes the Commissioners, the Mayors, and District Medical Officers of the principal towns, the Chief Sanitary Officer, Major-General Sir Courtenay Manifold, C.M.G., and Colonel A. Cochrane, Kyrenia, Dr. Raouf, Dr. Coureas, Dr. T. Evangelides, the Hon. M. Munir, O.B.E., Mrs. Patsalos, Nicosia, Mr. Zenon Pierides, Mr. D. N. Dimitriou, O.B.E., Larnaca, the Hon. Sir P. L. Cacoyannis, Kt., Limassol, Dr. Smitten, Pendayia, and Mrs. E. F. Passingham, Hon. Secretary and Treasurer.

Considerable assistance was given to Dr. N. D. Bardswell, the Medical Commissioner of the National Association for the Prevention of Tuberculosis, who was conducting a survey of tuberculosis on behalf of the Association.

The Philip Dispensary for Tuberculosis was established in Nicosia with Dr. T. Evangelides as League Tuberculosis Officer, and Mrs. E. F. Mitchell as Health Visitor. A Care Committee was formed consisting of Mrs. Patsalos, Mrs. G. Chrysafinis, Madame U. Midhat and Mrs. E. F. Passingham.

The social work of the League is made possible by the sale of adhesive " seals " for letters, parcels, etc., of which about 400,000 were distributed.

SALE OF SEALS FOR THE RELIEF OF TUBERCULOSIS.

The second annual sale of seals was arranged, after a meeting of the Sub-Committee consisting of Mrs. Battershill, the Commissioner of Nicosia, the Chief Sanitary Inspector and the Hon. Secretary and Treasurer.

The Director of Education allowed seals to be sold in the schools ; the Postmaster-General put them on sale at the principal Post Offices; the local Cinemas exhibited advertisement slides free of charge and the local newspapers printed facsimiles of the seal from blocks presented by the Editor of the *Cyprus Mail.*

A special collection on behalf of the League was also arranged in the larger towns in December. All these combined efforts resulted in the sum of £323. 15*s*. 0*p*. being collected.

ST. JOHN AMBULANCE ASSOCIATION.

First-Aid Classes for women were organized by the Honorary Secretary (Mrs. E. F. Passingham) at the Philip Dispensary under the direction of Dr. T. Evangelides.

The first examination for women was held in May, 1937.

First-Aid and Home Nursing Classes were continued in the Autumn of 1937, with increased numbers.

THE ANNUAL CONFERENCE OF THE NATIONAL ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

The Hon. Secretary and Major-General Sir Courtenay Manifold, C.M.G., attended and spoke at the above annual conference held in the University of Bristol, England, in July, 1937.

WORLD'S YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

In June, 1937, the Hon. Secretary of the Social Hygiene Council visited the Headquarters in Geneva, and discussed with the General Secretary the possibilities of establishing, with their help, a Hostel for Working Girls, where training would be provided for domestic servants in Nicosia.

APPENDIX G.

REPORT ON THE MENTAL HOSPITAL FOR THE YEAR 1937.

By Dr. S. Lysandrides, *Medical Superintendent.*

Statistics.—On the 31st December, 1937, there were 216 patients (145 males, 71 females), whilst on the 31st December, 1936, there were 205 patients (136 males, 69 females), an increase of 11 patients (9 males, 2 females). The total number treated was 256 (180 males, 76 females).

Admissions.—During the year 51 patients were admitted ; of these 44 were males and 7 females. Of the foregoing number 15 males and 2 females were cases of re-admission.

Discharges.—Total number 31, divided as follows : Discharged recovered : 16 males, 2 females. Discharged improved : 12 males, 1 female.

Escapes.—There was one escape during the year on the part of a known criminal who had been sentenced to three years' imprisonment and who whilst in the Central Prison feigned insanity with the object, as was proved later, of securing his transfer to the Mental Hospital whence his escape would be easier. When I examined him in the prison I came to the conclusion and reported that he was malingering, yet following his insistence and in view of the trouble caused by such cases to the prison staff, he was removed to the Mental Hospital for further observation. His malingering having been proved beyond doubt it was intended to send him back to the Central Prison, but in the early hours of 3rd October, 1937, he escaped, having broken through the window of his cell and jumped over the surrounding wall. It was only after two months that he was arrested, actually armed and on the point of committing a robbery. The Assize Court imposed the maximum sentence of 7 years' imprisonment to run concurrently.

Deaths.—During the year 9 patients (7 males, 2 females) died; the causes of deaths are given in Table II.

Visitors.—His Excellency the Governor honoured the Mental Hospital with a visit on New Year's Day. The Colonial Secretary visited us twice during the year. The Hospital was inspected on several occasions by the Director of Medical Services, who with his usual interest followed the work carried out therein, bestowing every assistance and encouragement. During this year the Visiting Board, consisting of Mrs. A. Shellish, M. Munir Bey, O.B.E., and Dr. A. Finiefs, held quarterly meetings, inspected the Hospital and made recommendations and suggestions to the Government for the improvement of the Institution. Visits from relatives and friends of the inmates were again numerous during the year and the Hospital was visited by persons interested in the public welfare.

Buildings.—Grave difficulties were experienced during the year in accommodating the steadily rising number of patients. The existing rooms are insufficient and for this reason more patients than advisable are put together in the same room. Sometimes even the dining hall as well as the sick rooms have been utilized for this purpose. I pointed out the necessity of putting up new buildings and I understand that this will be accomplished early in 1938. The difficulties encountered in the past with regard to the water supply have now been definitely overcome by the acquisition from the Cyprus Irrigation Co. of good and plentiful running water. Nevertheless for the proper use of this supply it is necessary for it to be distributed to all required parts of the hospital, as now it is available only in a few spots out in the grounds. I admit that much has been done and the Mental Hospital has progressed considerably during the last few years, but its needs were very great and therefore much remains to be done. The necessity of having a recreation room for the male patients is very pressing, as at present no place is available for their day-time occupation, particularly during the winter when it is not possible to keep them out of doors. Two padded rooms are also required, one for each division, for patients who are very violent and dangerous to themselves. The increased number of patients necessitated an increase in the number of attendants, who, however, live crowded in the three rooms previously occupied by only seven persons, the total number of attendants in the past. It is imperative that three more rooms, two for the male attendants and one for the females, be constructed and also two small kitchens, as, in view of the fact that they are not provided with food by the Hospital, a place where they can prepare their meals is necessary.

Staff.—The staff proved insufficient for duties in the care and supervision of the increased number of patients, and three more attendants, two males and one female, were appointed. The staff now consists of the following :—

The Medical Superintendent.
1 Head Warder.
12 Male Attendants.
6 Female Attendants.
1 Barber Attendant.
1 Cook.
1 Kitchen-boy.
1 Washerwoman.

The staff in general worked satisfactorily and I wish to make special mention of the services rendered by the Head Warder, who is hardworking and devoted to his job ; he is of great help to me in carrying out the administrative work of the hospital. Dr. J. Marcellos, Honorary Dentist, whenever called upon, willingly offered his services. The Honorary Oculist, Dr. Calavros, visited the Mental Hospital twice for the treatment of patients with eye troubles. The Medical Superintendent was absent on leave for 27 days and during this period Dr. H. Symeonides, Medical Officer, 1st Grade, acted in his place very efficiently and I am greatly indebted to him.

General Health.—The general health of the inmates and staff during the year was good. There were only a few mild cases of influenza, malaria and sepsis, especially of the lower extremities. 60 slight cases of injury were recorded, of which 12 were self-inflicted, 19 were caused by other patients and 29 were the result of accidents, mostly due to epileptic falls.

Occupation and Amusements of Patients.—The system of employing suitable and capable patients in various occupations was continued with satisfactory results. Such patients assisted, under supervision, in cleaning the Hospital, nursing their fellow patients, gardening, washing, whitewashing, water carrying, etc. Needle work, sewing and other handicrafts were done by some female patients. The assistance of many patients of this category is appreciable while they themselves derive considerable benefit from their occupation.

For their amusement, patients were kept in the open for as long as possible during the day and were free to do as they liked under supervision. They play various native games and also football ; certain of them read the papers and periodicals available in the reading-room, while the gramophone proved again a great attraction. Cigarettes were distributed as rewards to working patients and proved an excellent inducement to work.

Festivities.—On the 27th of December, 1937, a special Christmas lunch was as usual provided for the patients and at which a local band played. Presents were again given to all patients in a position to appreciate and use them. The cost of the lunch and presents was met by a grant of £17 from the Hospital Christmas Fund, and Mr. Poulia of Dianellos and Vergopoulos very generously contributed, as on other occasions, a large quantity of cigarettes.

Religious Services.—For the benefit of the Greek-Orthodox inmates two Holy Communion Services at Christmas and one at Easter were held during the year. Two Moslem services were also held on the occasion of the two Bairams. All the services were well attended and a large number of the patients followed the preaching attentively.

Table I.—Showing the Number of Admissions, Re-Admissions, Discharges and Deaths during the Year ended 31st December, 1937.

	Males	*Fem.*	*Total*	*Males*	*Fem.*	*Total*
Remaining in Mental Hospital, 1.1.1937				136	69	205
Cases admitted :						
First Admissions	29	5	34			
Re-Admissions	15	2	17			
Total admitted during the year				44	7	51
Total under care during the year				180	76	256
Cases discharged :						
Recovered	16	2	18			
Improved	12	1	13			
Died	7	2	9			
Total discharged or died during the year				35	5	40
Remaining in the Hospital on 31st December, 1937				145	71	216

TABLE II.—OBITUARY, SHOWING THE CAUSES OF DEATHS, DURING THE YEAR 1937, WITH THE FORM OF MENTAL DISORDER AND AGE AT DEATH.

Register No.	*Age*	*Sex*	*Form of Mental Disorder*	*Date of Admission*	*Cause of Death*
M. 205	22	M.	Epileptic Psychosis	8. 9.1931	Status Epilepticus.
M. 77	53	M.	Encephalitis Lethargica	31. 5.1929	Exhaustion.
F. 159	18	F.	Oligophrenia, Idiocy	13.10.1936	Epileptiform attacks.
M. 75	38	M.	Schizophrenia	13. 5.1929	Heart failure.
M. 447	45	M.	Acute Confusional Psychosis	11. 6.1937	Collapse.
M. 444	42	M.	General Paralysis	17. 4.1937	Exhaustion.
M. 449	58	M.	General Paralysis	1. 7.1937	Exhaustion.
F. 166	43	F.	Mania	18. 5.1937	Exhaustion.
M. 2	77	M.	Dementia	8. 8.1895	Senile decay.

TABLE III.—SHOWING THE FORM OF MENTAL DISORDER OF THE ADMISSIONS, DISCHARGES (RECOVERIES—IMPROVEMENTS) AND DEATHS DURING THE YEAR AND FORM OF MENTAL DISORDER OF THE INMATES ON 31ST DECEMBER, 1937.

Form of Mental Disorder	Admissions			Discharges (recoveries–improvements)			Deaths			Remaining in Hospital		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Oligophrenia or Mental Deficiency (Idiocy, Imbecility, Feeblemindedness, Moral Insanity)	6	—	6	6	—	6	—	1	1	25	5	30
Schizophrenia (Simplex, hebephrenia, Katatonia, Paranoides)	10	—	10	2	1	3	1	—	1	60	29	89
Paraphrenia, Paranoia	2	2	4	1	—	1	—	—	—	11	7	18
Manic—Depressive Psychosis (Mania, Melancholia, Alternative)	8	4	12	9	1	10	—	—	1	8	7	15
Presenile and Senile Psychosis	2	—	2	—	—	—	—	—	—	6	3	9
Acute Confusional Psychosis	2	1	3	—	1	1	1	—	1	3	—	3
Alcoholic Psychosis	3	—	3	4	—	4	—	—	—	1	—	1
Epileptic Psychosis	5	—	5	3	—	3	1	—	1	10	6	16
General Paralysis of the Insane	4	—	4	—	—	—	2	—	2	7	1	8
Encephalitis Lethargica	—	—	—	1	—	1	1	—	1	2	1	3
Dementia, Secondary or Terminal	—	—	—	—	—	—	1	—	1	11	12	23
Feigned Insanity	2	—	2	2	—	2	—	—	—	1	—	1
Total	44	7	51	28	3	31	7	2	9	145	71	216

APPENDIX H.

REPORT ON COMMUNICABLE DISEASES IN CYPRUS DURING 1937.

By Dr. C. S. Markides, M.D., D.P.H., *Health Officer.*

During the year, Malaria, Tuberculosis, Trachoma and Typhoid Fever, have been prevalent as in previous years, while the severe epidemic of Cerebro-Spinal Meningitis which broke out towards the end of 1936 continued.

The following infectious diseases were reported:—

TABLE I.

Disease	*Cases in* 1936	*Percentage of the total*	*Cases in* 1937	*Percentage of the total*	*Morbidity per* 10,000 *in* 1937
Typhoid Fever	667	47.7	666	32.5	17.95
Dysentery	51	3.7	84	4.2	2.26
Pulm. Tuberculosis	280	20.0	255	12.7	6.94
E.C.S. Meningitis	38	2.8	837	41.0	22.56
Diphtheria	31	2.3	16	0.8	0.40
Chicken-Pox	303	21.7	164	8.0	8.16
Measles	9	0.8	9	0.5	0.29
Scarlet-Fever	8	0.7	2	0.2	0.05
Acute Anterior Poliomyelitis	3	0.3	1	0.1	0.03
Total	1,390	100	2,035	100	54.86

The increase in the total number of infectious diseases resulted from the extraordinary incidence of E.C.S. Meningitis which constituted 41.0% of the total number of infectious diseases notified.

Malaria and Pulmonary Tuberculosis, having been dealt with elsewhere, are not included in this paper in detail.

TYPHOID FEVER.

Lack of proper latrine accommodation and the custom, common in rural areas especially, of keeping manure heaps in the open thereby providing fertile breeding places for flies, are responsible for Typhoid Fever becoming endemic.

Water supplies, although in several places in an unsatisfactory condition, play but a small part in the transmission of infection. Most of the small outbreaks in villages have been "fly-borne". The figures in Table II show that the disease has become more prevalent in the last two years.

TABLE II.—TYPHOID FEVER, 1933–1937. (*Rate per* 10,000 *population.*)

Year	*Nicosia*	*Larnaca*	*Limassol*	*Famagusta*	*Paphos*	*Kyrenia*	*Colony*
1933	10.2	19.1	39.4	4.5	8.6	11.3	14.8
1934	7.4	38.6	12.3	5.1	7.2	3.9	11.4
1935	19.4	20.7	12.6	11.3	9.0	11.6	12.0
1936	26.08	12.61	15.58	14.17	15.7	12.50	18.16
1937	23.16	19.04	12.16	14.03	13.21	25.70	17.95
Aver. rate	17.25	22.07	18.08	9.82	10.74	13.00	14.63

This increase should be attributed to more prompt and regular notification by private medical practitioners who have now realized the importance of the systematic notification of infectious diseases.

TABLE III.—TYPHOID FEVER IN 1936–1937. (*By District.*)

District	*Cases in* 1936	*Rate per* 10,000	*Cases in* 1937	*Rate per* 10,000	*Difference per* 10,000
Nicosia	309	26.08	278	23.16	— 2.92
Larnaca	58	12.61	89	19.04	+ 6.43
Limassol	93	15.58	73	12.16	— 3.42
Famagusta	108	14.17	107	14.03	—
Paphos	70	15.70	59	13.21	— 2.49
Kyrenia	29	12.50	60	25.70	+13.20
Colony	667	18.16	666	17.95	— 0.21

Distribution of Typhoid Cases.

[*See figures and tables in Annual Medical & Sanitary Report, III. Hygiene and Sanitation, (II) (a).*]

Chronic Distribution.

In all 666 cases of Typhoid Fever have been notified during 1937, as compared with 667 in 1936. The maximum seasonal prevalence was in August with 136 cases, 20.5% of the total number, followed by September with 111 cases, 16.2%, and December with 80 cases, 12.1% of the total number of reported cases.

Distribution by District.

The highest incidence was observed in Kyrenia District with 60 cases giving a rate of 25.70 per 10,000, followed by Nicosia District with 278 cases and a rate of 23.16 per 10,000.

Distribution by Age Group.

The disease shows the same preference for the lower ages, as in 1936, especially for the 5–9 group with 23.1% of the total number of cases and a rate of 35.78 per 10,000 ; followed by the group 10–14 with 19.1% of the total number and a morbidity rate of 31.70 per 10,000. The group under 5 presents a morbidity rate of 25.05 per 10,000.

The incidence decreases as the age increases due to " natural immunity " acquired as a result of small numerous unrecognized infections.

Distribution by Sex and Race.

A slight preference is observed for females with 54.80% of the total number of cases, and a rate of 19.43 per 10,000 of population, compared with 45.20% for males and a morbidity rate of 16.47.

As regards the race distribution, as in previous years, no case was observed amongst the English residents, due to the fact that English residents living in Cyprus are usually of a higher social standing and are consequently not so exposed to the danger of infection.

Form of Prevalence.

The disease occurred again in a rather sporadic form, and no serious epidemics broke out. Small epidemics were observed in the following villages :—

Village	*District*	*No. of Cases*
Ayia Varvara	Nicosia	21
Ora	Larnaca	12
Aradhippou	,,	12
Omodhos	Limassol	9
Vasa	,,	10
Lapithos	Kyrenia	28

All these epidemics were fly-borne, with the exception of Ora and Ayia Varvara, where they were water-borne.

In water-borne epidemics, the disinfection of wells—the only source of water supply—put an immediate stop to the epidemic and no case was reported after this measure was taken. In view, however, of certain difficulties encountered in controlling the outbreak at Ayia Varvara, a temporary isolation hospital had to be established there.

Distribution of Cases by the Principal Towns.

The highest rate of morbidity was observed at Ktima (Paphos District), being 25.2 per 10,000, and the lowest at Varosha (Famagusta District) being 4.2 per 10,000. The average for the six towns was 15.1 per 10,000 of the population.

The rate among town dwellers is entirely proportional to their standard of living.

From Table IV it appears that morbidity was considerably higher in rural than in urban areas, owing to the inferior sanitary arrangements, the prevalence of manure heaps and the lower standard of education among the people themselves.

Table IV.—Typhoid Morbidity in Urban and Rural Areas in 1937.

	Urban		*Rural*		*Colony*	
District	*Cases*	*Rate*	*Cases*	*Rate*	*Cases*	*Rate*
Nicosia	53	19.7	225	27.41	278	23.16
Larnaca	22	16.4	67	20.29	89	19.04
Limassol	17	10.2	56	10.63	73	12.16
Famagusta	5	4.2	102	15.93	107	14.03
Paphos	12	25.2	47	11.81	59	13.21
Kyrenia	5	21.9	55	26.26	60	25.70
Colony	114	15.4	552	18.84	666	17.95

The greatest difference in morbidity between rural and urban areas was observed in Famagusta District (15.93 per 10,000 in rural as compared with 4.2 in urban areas). Paphos District alone presents higher morbidity in urban, the rate being 25.2 as compared with 11.81 per 10,000 in rural areas.

MORTALITY OF TYPHOID FEVER IN 1937.

Tables V and VI show the Typhoid mortality in 1937. In all, 55 cases out of 666 proved fatal, giving a mortality percentage of 8.2 as compared with 6.6 in 1936. The death rate per 10,000 of the total population was 1.4

The highest mortality, 10.3%, was observed in Famagusta District, and the lowest 3.3% in Kyrenia. A high mortality was observed amongst the elder ages, being 26.6% in the group 45-54 and 25.0% in the group over 55 years of age. The group under 5 gave a mortality of 9.5%.

TABLE V.—MORTALITY AND DEATH RATE OF TYPHOID FEVER IN 1937. (*By District.*)

District	*Estimated Population*	*No. of Cases*	*Morbidity per* 10,000	*No. of Deaths*	*Mortality percentage*	*Death rate per* 10,000
Nicosia	120,031	278	23.16	26	9.3	2.1
Larnaca	46,705	89	19.04	7	7.8	1.4
Limassol	60,004	73	12.16	7	9.6	1.1
Famagusta	76,235	107	14.03	11	10.3	1.4
Paphos	44,658	59	13.21	2	3.4	0.4
Kyrenia	23,302	60	27.70	2	3.3	0.8
Colony	370,935	666	17.95	55	8.2	1.4

TABLE VI.—MORTALITY OF TYPHOID FEVER IN 1937 BY AGE GROUP.

District	*Estimated Population*	*No. of Cases*	*Morbidity per* 10,000	*No. of Deaths*	*Mortal percentage*	*Death rate per* 10,000
Age Groups:						
Under 5	41,915	105	25.05	10	9.5	2.3
5– 9	43,029	150	35.78	10	6.5	2.3
10–14	40,060	127	31.70	9	7.0	2.2
15–24	73,816	172	23.19	15	8.7	2.0
25–34	54,157	62	11.44	4	6.4	0.7
35–44	41,174	19	4.61	1	5.3	0.2
45–54	35,239	15	4.25	4	26.6	1.1
55 over	41,545	8	1.92	2	25.0	0.5
N. R.	—	4	—	—	—	—
Total	370,935	666	17.95	55	8.2	1.4

MEASURES TAKEN.

In addition to the routine precautions taken on the occurrence of a case of typhoid propaganda was attempted with a view to drawing people's attention to the importance of latrines and a number of pit latrines were opened for trial and propaganda purposes.

A considerable number of wells were disinfected by the Sanitary Staff in various villages, especially at Ora village, where more than 95 wells were treated.

Continual efforts were made, with the co-operation of Commissioners, for the improvement of water supplies in the country, and conditions in several villages were improved.

T.A.B. inoculations were carried out in villages, especially where epidemics had been recorded. Table VII shows particulars of T.A.B. inoculation carried out in 1937.

TABLE VII.—T.A.B. INOCULATIONS MADE IN 1937.

Village	*First Inoculation with* 0.5 cc.	*Second Inoculation with* 1.00 cc.	*Percentage of 2nd Inoculation made*
Morphou	64	24	37.6
Ora	92	38	47.7
Famagusta	57	54	94.7
Omodhos	411	173	42.0
Vasa	251	176	70.1
Lapithos	653	590	90.3
Kazaphani	183	138	75.4
Ayia Varvara	273	250	91.5
Paralimni	390	300	76.6
Angastina	130	105	80.9
Vathylakkas	108	79	73.1
Platanisso	96	63	65.6
Lakatamia	209	159	76.0
Dhali	517	490	94.7
Potamia	103	100	97.1
Mathiati	513	513	100.0
Total	3,972	3,252	81.9

SOME OBSERVATION ON T.A.B. INOCULATION.

As foreshadowed last year in my Annual Report on Communicable Diseases (Annual Medical and Sanitary Report, 1936, Appendix G. page 59), T.A.B. inoculation was carried out in the villages round Nicosia town, where the incidence of Typhoid Fever was considerable.

Two villages, viz.: Lakatamia and Eylenja were left out of the programme for comparison purposes.

The results obtained were as shown in Table VIII.

TABLE VIII.

Villages where T.A.B. inoculation was carried out	*Typhoid Cases reported in* 1936	*Typhoid Cases reported in* 1937	*Comparison* *Increase* %	*Comparison* *Decrease* %
Ayii Omoloyitadhes	17	8	—	52.9
Ayios Dhometios	22	7	—	68.2
Kaimakli	26	3	—	88.4
Paliouriotissa	14	2	—	85.7
Engomi	2	2	—	—
Strovolos	8	5	—	37.5
Villages where T.A.B. inoculation was not carried out :				
Lakatamia	6	23	78.2	
Eylenja	2	5	60.0	—

Only two inoculated persons were attacked by the disease during the Typhoid season, one at Paliouriotissa, 3 days after the 2nd injection, and one at Dhali, 12 days after the 2nd injection.

PARATYPHOID A AND B.

Altogether 34 cases of Paratyphoid A have been notified in 1937 as compared with 9 cases in 1936, and 82 cases of Paratyphoid B out of which 20 occurred at Morphou village (Nicosia District), where a small epidemic of Paratyphoid B broke out in November, 1937, due to contaminated meat.

DYSENTERY.

During the year 84 cases of Dysentery have been reported, as compared with 51 in 1936, giving a morbidity rate of 2.26 per 10,000, as compared with 1.30 in 1936.

During the last five years 1933–1937, the average morbidity was 5.3 per 10,000 the maximum of 9.8 per 10,000 as shown in Table IX, occurring in Limassol District.

TABLE IX.—DYSENTERY DURING 1933–1937.

Rate per 10,000.

Year	*Nicosia*	*Larnaca*	*Limassol*	*Famagusta*	*Paphos*	*Kyrenia*	*Colony*
1933	2.9	4.3	22.5	5.8	16.5	4.8	8.7
1934	4.1	10.1	19.1	18.2	5.4	5.2	10.4
1935	3.2	3.7	4.8	4.8	2.2	1.3	3.6
1936	1.5	1.7	1.2	1.4	1.3	0.8	1.3
1937	1.8	4.5	1.8	2.5	1.7	0.8	2.26
Aver. rate per 10,000	2.7	4.8	9.8	6.5	5.5	2.6	5.3

Only 1 out of 84 cases of Dysentery reported has been bacteriologically confirmed as being of Flexner type. The fact that 35.8% of the total number of cases, consist of children under the age of 5, and the seasonal prevalence being highest in summer, corroborate the views expressed in my Report of 1936 that a considerable number of cases reported as Bacterial Dysentery, were nothing more than cases of ordinary Summer Infantile Enteritis.

The cause of the endemicity of Dysentery in Cyprus is the same as for Typhoid Fever.

INTESTINAL PARASITISM.

During the summer season an investigation on "Intestinal Parasitism" was conducted in some insanitary places in Kyrenia District and Pitsillia Division of Limassol District.

In all 46 stools from children under 10 years of age were examined and the following results were obtained :—

No. of Stools examined	*Results*
20 were reported	Negatives.
21 presented ova of	Ascaris Lumbricoides.
1 ,,	Oxyuris Vermicularis.
1 ,,	Hymenolepis Nana.
1 ,,	Ascaris Lumbricoides Trichuris Trichiura (Trichocephalus dispar).
1 ,,	Ascaris Lumbricoides Trichocephalus dispar Taenia Sagginata.
1 ,,	Ascaris Lumbricoides Hymenolepis Nana.

Ascaris Lumbricoides appears to be the most common species of Intestinal worm in Cyprus.

This is the first time that "Trichuris Trichiura" (Trichocephalus dispar) and Hymenolepis Nana have been observed in Cyprus.

DIPHTHERIA.

16 cases of Diphtheria were reported, as compared with 31 in 1936. Only 12.5% of the total number of cases were observed amongst the age group under 1 year, 75.0% amongst the group of 1–4 and 12.5% amongst the group 5–9.

The maximum of seasonal prevalence was observed in September.

SMALL-POX.

No case of Small-Pox has been reported during the last fifteen years.

Several thousand vaccinations are regularly carried out by the Sanitary Staff. Figures in respect of vaccinations carried out during 1937 are included in the Report of the Director of Medical Services.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

The Epidemic of Cerebro-Spinal Meningitis which broke out towards the end of 1936, continued in epidemic form up to May of 1937 and sporadically through the summer.

In all 837 cases were notified in 1937, giving a morbidity rate of 22.8 per 10,000, out of which 280 proved fatal, giving a mortality percentage of 35.0

The highest incidence was observed in Paphos District, followed by Nicosia and Limassol Districts, as shown in Table X, and especially in Lefka and Morphou Divisions of Nicosia District where there are mining areas, where overcrowding was unavoidable.

TABLE X.—DISTRIBUTION OF C.S.M. CASES. (*By District.*)

District	*Cases*	*Rate per* 10,000
Nicosia	426	35.5
Larnaca	22	4.7
Limassol	159	26.4
Famagusta	16	2.0
Paphos	183	40.9
Kyrenia	31	13.3
Colony	837	22.3

A detailed report as regards Cerebro-Spinal Meningitis epidemics which occurred in Cyprus from 1878 is included in this Annual Report under Appendix B.

APPENDIX I.

REPORT ON VENEREAL DISEASES CLINICS.

By Dr. N. Ch. Michaelides, *Medical Officer in charge of V. D. Clinics.*

Ten years have lapsed since the establishment of Venereal Diseases Clinics in the Colony and during this period a systematic campaign has been waged against the Diseases.

Staff.—5 Medical Officers, 11 Male and 10 Female Attendants.

Clinics.—There are five Venereal Diseases Clinics, one in each District except Kyrenia.

Attendances.—During 1937, 4,252 patients (2,547 male and 1,705 female) were seen in all centres, comprising 2,636 new patients (1,609 male and 1,027 female) and 1,616 old patients (938 male, 678 female).

503 of the old patients were suffering from gonorrhoea, 537 from syphilis and 576 from gonorrhoea and syphilis.

The distribution of patients is shown in the following table :—

	Nicosia	*Larnaca*	*Limassol*	*Famagusta*	*Paphos*	*Total*
Old patients, male	334	127	212	169	96	938
Old patients, female	328	120	146	47	37	678
New patients, male	851	246	282	142	88	1,609
New patients, female	562	163	128	127	47	1,027
Total	2,075	656	768	485	268	4,252

The actual number of treatments given to new and old cases in all clinics at daily attendances, amounted to 179,993 as follows :—

Nicosia	*Larnaca*	*Limassol*	*Famagusta*	*Paphos*
67,677	27,290	41,686	36,007	7,333

719 of the above (325 male, 394, female) suffered from both gonorrhoea and syphilis. In addition 247 skin diseases were treated during the year and 269 patients were examined and found free from venereal diseases.

The number of 1,730 syphilitic patients comprised 617 new and 1,113 old patients. 21,530 injections were given for syphilis as follows : Arsenic 10,450, Bismuth 7,127, Mercury, 3,418, Tryparsamide 248 and 22 injections for Fever therapy. 287 Dark Field examinations were made for *Spirohaeta Pallida* of which 83 were positive. 3,625 Blood Wassermann examinations were carried out and 739 were returned positive, *i.e.* 20.3% compared with 29.9% in 1936. 57 Cerebro-Spinal fluid examinations were made in the Venereal Diseases Clinic, Nicosia.

Out of 2,442 patients suffering from gonnorrhoea, 1,363 were new and 1,079 old patients who continued their treatment throughout the year. The method of gonorrhoea treatment was the same as that of previous years, *i.e.* local treatments, diuretics, vaccines and other injections especially for complications and recommendations for a suitable diet, etc. 2,405 vaccines and injections were given for gonorrhoea treatment during the year and 474 urethroscopic examinations and 3,250 prostate massages were undertaken.

Cures.

1,229 cases have been cured during the year (898 male, 331 female). The classification being as follows :—

	Nicosia			Larnaca			Limassol			Famagusta			Paphos		
		M	F		M	F		M	F		M	F		M	F
Gonorrhoea	584	428	156	12	12	—	74	52	22	14	14	—	2	2	—
Syphilis	49	40	9	—	—	—	—	—	—	6	6	—	—	—	—
Other Venereal Diseases	227	153	74	67	51	16	93	61	32	82	66	16	19	13	6
Total	860	621	239	79	63	16	167	113	54	102	86	16	21	15	6

CASES OF VENEREAL DISEASE.

The distribution of the 4,428 Venereal Disease Cases treated in the Clinics, was as follows:—

	Nicosia			Larnaca			Limassol			Famagusta			Paphos			Total		
	Total cases	M	F	Total cases	M	F	Total cases	M	F	Total cases	M	F	Total cases	M	F	Total cases	M	F
Gonorrhoea	960	465	495	438	212	226	396	207	189	320	182	138	128	95	33	2,242	1,161	1,081
Syphilis	859	475	384	237	131	106	357	232	125	166	112	54	111	80	31	1,730	1,030	700
Soft Chancre	143	131	12	49	41	8	37	34	3	29	20	9	10	8	2	268	234	34
Other Venereal Diseases	127	67	60	18	10	8	15	15	—	18	11	7	10	6	4	188	109	79

NEW CASES.

Out of 4,252 patients attending all Venereal Diseases Clinics during the year, 2,633 were new patients (1,606 male 1,027 female).

(*a*) *Male.*—The distribution of diseases among the 1,606 male patients is shown in the following table :—

	Nicosia	*Larnaca*	*Limassol*	*Famagusta*	*Paphos*	*Total*
Gonorrhoea	248	128	100	68	22	566
Syphilis	199	25	55	17	19	315
Gonorrhoea and Syphilis	30	5	9	3	—	47
Other Venereal Diseases	198	51	49	31	14	343
Non-Venereal Diseases	186	43	80	21	16	346
Exam. not completed	5	12	7	12	17	53
Total	866	264	300	152	88	1,670

Gonorrhoea Cases.—Out of 613 new male patients suffering from gonorrhoea, 566 suffered from gonorrhoea only and 47 from both gonorrhoea and syphilis, 447 attended with acute and 158 with chronic gonorrhoea, 36 were suffering from strictures, 57 from epididymitis or orchitis, 33 from gonorrhoeal rheumatism, 18 from cystitis and 2 from rectal gonorrhoea.

Other Venereal Diseases Cases.—343 new patients were suffering from other venereal diseases, *i.e.* 234 from soft chancre, 53 from condylomata, 19 from lymphogranuloma inguinalis, 25 from balanitis, 12 from genital herpes. 30 were suffering from urethritis not due to gonorrhoea.

Syphilis Cases.—Out of 362 male new syphilitic patients, 315 were suffering from syphilis only, 47 from both gonorrhoea and syphilis. The classification of the 362 new male syphilitic patients is shown in the following table :—

Early acquired Syphilis : 189 :—

(*a*) Primary Syphilis, Dark Field positive, seronegative	35
(*b*) Primary Syphilis, Dark Field positive, seropositive	96
(*c*) Secondary Syphilis (with rash)	54
(*d*) Early Neurosyphilis, asymptomatic (only serologically diagnosed)	4

Late acquired Syphilis : 156 :—

(*a*) Late Asymptomatic with Blood Wassermann positive only, including latent and unknown Syphilis	107
(*b*) Tertiary Mucocutaneous	11
(*c*) Visceral Syphilis	10
(*d*) Cardiovascular Syphilis	12
(*e*) *Neurosyphilis* : 16 :—	
(i) Tabes Dorsalis	2
(ii) G.P.I.	1
(iii) Other Syphilitic affections of the nervours system	13

Congenital Syphilis : 17 :—

(*a*) Early Congenital Syphilis	4
(*b*) Late Congenital Syphilis	9
(*c*) Parasyphilitic cases (2nd or 3rd generation of Syphilis)	4

76 male patients were admitted to hospital during the year as in-patients.

(*b*) *Female.*—Out of 1,027 new female patients, 254 were prostitutes and 567 were infected maritally. The distribution of diseases is shown in the following table :—

	Nicosia	*Larnaca*	*Limassol*	*Famagusta*	*Paphos*	*Total*
Gonorrhoea only	193	105	62	81	13	454
Syphilis only	108	23	11	9	8	159
Gonorrhoea and Syphilis	48	13	17	18	—	96
Other Venereal Diseases	72	16	3	16	6	113
Non-Venereal or Skin Diseases	148	34	42	20	16	260
Exam. not completed	7	8	—	10	5	30
	576	199	135	154	48	1,112

Gonorrhoea Cases.—Out of 550 new female patients suffering from gonorrhoea, 454 were suffering from gonorrhoea only and 96 from both gonorrhoea and syphilis. 220 came to the Clinic with acute gonorrhoea, 318 with chronic gonorrhoea, 73 were suffering from Salpingitis, 7 from rectal gonorrhoea, 21 from gonorrhoea cystitis and 27 from gonorrhoea rheumatism.

Other Venereal Diseases Cases.—113 new female patients were suffering from other venereal diseases as follows : 20 cases of condylomata, 2 of genital herpes, 6 of lymphogranuloma inguinalis, 34 of soft chancre and 51 of vulvovaginitis.

Syphilis Cases.—Out of 255 new female syphilitic patients, 159 were suffering from syphilis only and 96 from both gonorrhoea and syphilis. The distribution of the 255 new cases of female syphilitic patients is shown in the following table :—

Early acquired Syphilis : 93 :—	
(*a*) Primary Syphilis, Dark Field positive, seronegative	4
(*b*) Primary Syphilis, Dark Field positive, seropositive	39
(*c*) Secondary Syphilis (with rash)	37
(*d*) Early neurosyphilis, a symptomatic (only serologically diagnosed)	13
Late acquired Syphilis : 108 :—	
(*a*) Late asymptomatic with Blood Wassermann positive only, including the latent and unknown Syphilis	101
(*b*) Tertiary Mucocutaneous	2
(*c*) Visceral Syphilis	—
(*d*) Cardiovascular Syphilis	1
(*e*) *Neurosyphilis :* 4 :—	
(i) Tabes Dorsalis	1
(ii) G.P.I.	—
(iii) Other Syphilitic affections of the nervous system ..	3
Congenital Syphilis : 54 :—	
(i) Early congenital Syphilis	16
(ii) Late congenital Syphilis	30
(iii) Parasyphilitic cases (2nd or 3rd generation of Syphilis) ..	8

PROPHYLACTIC CENTRES.

12 prophylactic centres functioned during the year, 6 as private and 6 as municipal, one in each district town and one in Lefka.

The public appears to attach great importance to the efficacy of the treatment given by these centres as is obvious from the following attendances :—

Nicosia	*Larnaca*	*Limassol*	*Famagusta*	*Paphos*
27,568	7,800	25,563	4,219	3,717

PROPAGANDA.

The campaign against Venereal Diseases was continued throughout the year by means of lectures and films in the towns and villages and by the distribution of pamphlets.

APPENDIX J.

REPORT ON THE PHILIP TUBERCULOSIS DISPENSARY AND THE ATHALASSA SANATORIUM.

By Dr. Takis Evangelides, *Honorary Physician.*

(a) The Philip Tuberculosis Dispensary.

The work of the Tuberculosis Dispensary commenced in the Government Hospital and was continued there until 22nd March, 1938, when a building at 19 Favieros Street, Nicosia, was rented and equipped by the League.

Building.—The building is situated near the Paphos Gate, at a short distance from the Government Hospital and the centre of the town. This position proves very satisfactory for the Dispensary work. The main part of the Dispensary consists of a block with four rooms and one hall, at the back there is attached a small two-floored block with five rooms and garden ; one room has recently been used as a drugs dispensary, others being occupied by the Dispensary Orderly.

Staff.—The staff consists of a Medical Officer, a Health Visitor and a Dispensary Orderly. On several occasions Nurse Commissioner Jays, of the National Association for the Prevention of Tuberculosis attended the Dispensary, offering valuable assistance. Miss A. Christou was first appointed as Probationer Nurse, but after her resignation on 16th May, Mrs. E. F. Mitchell took her position and was promoted soon to be Health Visitor. Photios Argyrides, an old tuberculosis case in a quiescent stage, was appointed by the League in March, 1937, as Orderly as soon as he was discharged from the Athalassa Sanatorium.

Medicines.—The medicines prescribed to all tuberculosis cases attending the Philip Dispensary were supplied at the Government Hospital free of charge, but all the non-tuberculosis cases had to pay a very small fee according to the poverty Mukhtar's certificate they could produce.

During the month of October a small local dispensary for the supply of medicines on the premises was installed, the drugs being bought at cost price from the Government Hospital and since the 20th of this month all patients had their medicines free of charge. An alms box, however, has been placed in the entrance hall and all voluntary contributions collected by this means will be used for the purpose of covering some of the expenses of these medicines.

Sputum Examinations.—The examination of sputa was carried out at the Government Laboratory free of charge.

X-Rays.—All Radiograms were taken at the Government Hospital, and cases possessing poverty Mukhtar's certificate were charged from 1 piastre to 4 shillings for each radiogram.

Attendances.—Two sessions have been held weekly on Mondays and Fridays, from 9 a.m. to 1 p.m., but any cases coming on other days were not refused examination. Medical examination was free.

The cases attending the Dispensary consisted of patients :—

Coming on their own initiative, including contacts	238	61.03%
Referred by Government Medical Officers	54	13.84%
From Private Practitioners	37	9.48%
Discharged from Sanatorium	30	7.69%
From Chest Clinic, 1936	20	5.14%
Sent by Government Departments or Mukhtars, etc.	11	2.82%
Total	390	100%

The total number of attendances during 1937 was as follows :—

New cases	390
Re-attendances	473
Total	863

Out of the new cases, 195 (50 %) have been found suffering with pulmonary tuberculosis.

Table I shows the distribution of the new cases by Districts of the Island and Table II by months :—

TABLE I.

	Attendances		*Pulmonary T.B. Cases*		*Percentage*
Nicosia District :					
Town and Suburbs	131		43		
Village	123		84		
Total		254		127	50 %
Limassol District :					
Town and Suburbs	8		2		
Village	22		13		
Total		30		15	50 %
Larnaca District :					
Town and Suburbs	4		2		
Village	19		6		
Total		23		8	34.78 %
Famagusta District :					
Town and Suburbs	12		9		
Village	38		14		
Total		50		23	46 %
Paphos District :					
Town and Suburbs	1		1		
Village	10		9		
Total		11		10	90.90 %
Kyrenia District :					
Village	22		12		
Total		22		12	54.54 %
Grand Total		390		195	

TABLE II

Month	Attendances	Reattendances	New Cases	No. of Pulm. T.B. cases			No. of notified cases		
				Sputum positive	Non	Total	Sputum positive	Non	Total
January	13	2	11	9	2	11	6	2	8
February	30	8	22	16	3	19	10	2	12
March	64	31	33	16	9	25	6	3	9
April	64	25	39	23	9	39	11	6	17
May	71	46	25	7	7	14	11	4	15
June	143	49	94	11	9	20	4	5	9
July	51	32	19	5	6	11	4	3	7
August	93	66	27	9	6	15	3	2	5
September	68	47	21	4	9	13	4	4	8
October	92	63	29	2	8	10	2	6	8
November	97	55	42	1	6	7	1	5	6
December	83	55	28	4	7	11	3	2	5
Total	869	479	390	—	—	195	—	—	109

The routine work of the Dispensary was carried out as follows : Cases found suffering from other diseases than pulmonary tuberculosis were sent to their private doctors, or, if poor, were referred to the Government Hospitals. The tuberculosis cases referred to the Dispensary by their private doctors were returned to them, if this was the desire of their doctor, with a statement concerning the diagnosis and recommendations. The remainder were considered as Dispensary patients, and were treated at the Sanatorium (52 in all, *i.e.* 26.67% of all pulmonary tuberculosis cases), or at their homes.

Contacts.—Our aim has been to examine as many contacts with pulmonary tuberculosis as possible ; to this effect patients suffering with pulmonary tuberculosis were always asked to bring the members of their family for examination.

During the year, 97 contacts were examined, and 15 (15.46%) were found suffering with pulmonary tuberculosis. This percentage is high in comparison with similar figures from other countries, but the number of contacts examined is too small to allow of any conclusion ; possibly it has been influenced by the fact that often only members in a low state of health came for examination. This high percentage has been considerably raised by the discovery of six cases in one family of eight members, an event we consider of sufficient interest to describe.

Case 1.—Male, age 21, came to the Philip Dispensary for examination, complaining of haemoptysis, cough, etc., for one year. Diagnosed as suffering with pulmonary tuberculosis he was admitted to the Sanatorium where the sputum examination was positive. He said that one sister (*Case* 2) had pleurisy three years ago, but had now recovered. The family came for examination on request in April with the following result.

Case 2, patient's sister, age 20, found suffering with pulmonary tubercolosis with a sputum negative (—).

Case 3, patient's sister, age 13, found suffering with left pleurisy (tubercular in origin), diagnosed by physical and X-Ray examination.

Case 4, patient's sister, age 22, found suffering with pulmonary tuberculosis with a sputum positive (+), later on proved progressive.

Case 5, patient's brother, age 8, found suffering with early pulmonary tuberculosis with a sputum positive (+).

Case 6, patient's father, aged 53, found suffering with chronic pulmonary tuberculosis with a sputum positive (+).

Case 7, patient's sister aged 16, no evidence of tuberculosis.

Case 8, patient's mother, aged 51, no evidence of tuberculosis.

Case 1 died in the Sanatorium and case 4 is now in an advanced hopeless condition, but the other four cases have improved considerably and are able to continue their work. It might be mentioned that this family has been visited regularly and has received treatment and assistance from the League Fund.

Home Visits.—An attempt was made to visit as many homes as possible but it was decided by the President to confine our visits to Nicosia District only.

Our main aim during these visits was to teach members of the family how they can improve their state of health, through cleanliness, fresh air, sunshine and good food, to instruct them how to avoid infection from the patient in the home and to make arrangements for the patients' home treatment, and finally to form an impression of their economical condition, with the purpose of rendering assistance where necessary.

During these visits many difficulties were met with owing to the lack of rooms, beds, and sometimes the complete absence of windows, the fear of the patients lest they become known as tubercular, and the lack of knowledge of "healthy living," etc. On many occasions on our re-visits we found the home accommodation in the same bad condition as it was before our first visit, *i.e.* patients still sleeping with other persons in the same bed, not destroying their expectoration and some even resenting our visit and advice.

However, often we have been lucky enough to see windows constructed on our advice, patients sleeping in separate rooms or beds, spitting into disinfectant and generally following our advice.

Care Work.—To the most deserving cases assistance, such as food, bed and bedding, or payment of rent, was granted from the League Fund. With the exception of three Government Officers, who returned to their previous positions after their disease had been arrested, only three are known to us who have been employed through recommendation from the Philip Dispensary.

The following table gives details of the disposal of money :—

Months	*Families Assisted*	*Amount* £ s. p.
January	4	4 15 5
February	8	7 4 8
March	9	5 16 2
April	10	5 18 4½
May	7	4 9 0
June	8	5 11 5½
July	5	2 2 3½
August	5	3 1 3
September	4	2 2 6½
October	7	3 5 8
November	9	5 11 4½
December	8	5 5 8
Total		£55 5 4½

The details were almost entirely left to the Medical Officer, until the appointment of the Care Committee on 4th November, which has proved most helpful in dealing with this work of the Dispensary.

The Committee consists of the President of the League, the Medical Officer, the Honorary Secretary and Treasurer, the Health Visitor and three ladies, Mrs S. Patsalos, Mrs. E. Chryssafinis and Mrs. U. Midhat. Meetings are held every fortnight, the work done since each previous meeting being reported by the Tuberculosis Officer and Health Visitor and discussed by the members.

The amount of money spent on care work in a year is by no means what should be spent, but it is hoped that this will be much increased during the next few years.

Tuberculin Tests and Lectures.—To complete the description of work done by the Dispensary, I would like to mention that 2,500 school children, in 81 schools mostly in Nicosia District, have been tested by the Moro-Tuberculin test under Dr. N. D. Bardswell's instruction.

Two courses of lectures on First Aid to the Injured (St. John Ambulance Association) were given by the Medical Officer during the year and organized by the Honorary Secretary, who kindly gave her personal assistance in practical work.

Furthermore, the Medical Officer has made the translation from English to Greek of the articles in the League's monthly Bulletin on " Public Health ".

To conclude this report, I wish to thank the Health Visitor, Mrs. E. F. Mitchell, for her assistance in various ways, during the course of our work, and every one connected with the League.

(*b*) ATHALASSA SANATORIUM.

Building.—A new Pavilion with accommodation for eight female patients was completed at the beginning of 1937 by the donation of Mr. Chr. Georgiades.

There has not, however, been any actual increase in beds available, owing to a decrease of beds in various wards for the comfort and facility of patients.

The number of beds in the Sanatorium is therefore 53, *i.e.* 31 for males and 22 for females.

Staff.—The staff consisted of :—

1	Honorary Physician.
1	Matron.
1	Staff Nurse.
3	Nurses.
3	Orderlies (one paid by the Anti-Tuberculosis League).
1	Cook.
2	Kitchen boys.
1	Gardener.
1	Laundry woman.
1	Casual Labourer.

The District Medical Officer, Dr. R. A. Porter, supervised. The Honorary Dentist, Dr. J. Marcellos, made regular visits. The following table shows the number of patients treated.

	Males	*Females*	*Total*
Remaining at end of 1936	36	15	51
Admitted	61	32	93
Discharged	42	11	53
Deaths	24	17	51
Remaining at end of 1937	31	19	50

Most of the admissions were cases from the Philip Dispensary.

The following table shows the condition of discharged cases :—

					Condition of Sputum.	
	M.	*F.*	*Total*	*No. examined*	*On admission*	*On discharge*
Quiescent	11	4	15	8	—	—
				7	+	—
Much improved	13	3	16	1	—	—
				7	+	—
				8	+	+
Improved	6	3	9	9	+	+
Not improved	2	—	2	2	+	+
Worse	4	1	5	5	+	+
Left against advice within 2 weeks of admission	5	—	5	4	+	
				1	—	
Referred to Government Hospital within 10 days of admission	1	—	1	1	—	
Total	42	11	53	53		

This year we have been able, thanks to the care work done by the Cyprus Anti-Tuberculosis League, to discharge cases in other than the quiescent stage. Even the patients themselves were willing to leave the Sanatorium, knowing they would be attended at their homes, and instructed for their " home accommodation " for the prevention of the spread of the disease to their family members.

A waiting list of patients was not kept, as there were always one or two empty beds for each sex.

Malaria.—During the month of October some of the patients showed malaria infection and 26 blood specimens were taken from different suspected cases. 11 were positive. All cases recovered after a combined treatment of quinine and atebrine.

APPENDIX K.

REPORT ON DENTAL CLINICS.

By John G. Marcellos, *Honorary Dentist in charge of Dental Clinics.*

The total number of daily attendances at Hospital dental clinics (including Central and Athalassa Prisons, Mental Hospital, Sanatorium and Leper Farm) during the year was 37,986 which exceeds last year's figures by 5,267 or 16%. The work done, *i.e.* extractions, fillings and other treatments, amounts to 15,164 which is 3,350 or 28% more than last year. Details of attendances and work done are shewn in Table 1 here below :—

Table 1.

	Nicosia and Kyrenia	*Larnaca*	*Paphos*	*Famagusta*	*Limassol*
Consultations	7,401	4,077	3,917	2,213	2,492
Pyorrhoea	660	52	69	286	14
Disease of Mouth	576	95	68	98	13
Operations	8	—	—	—	—
Extractions	3,968	2,736	1,629	1,520	1,007
Fillings	1,823	132	230	70	100
Temporary fillings	725	392	266	404	162
Vulcanite plates	20	—	—	—	—
Scalings	489	70	165	20	19
Total	15,670	7,554	6,344	4,611	3,807

Schools.

During the year under review the services of the five Hon. Dentists were extended to 465 villages with results as shewn in Table 2 here below :—

Table 2.—Orthodox Schools.

		Males		*Females*	
District	*No. of Schools*	*Consultations*	*Extractions*	*Consultations*	*Extractions*
Nicosia and Kyrenia	116	2,455	1,510	1,841	954
Larnaca	111	1,757	1,194	1,403	767
Famagusta	36	1,342	655	742	372
Limassol	42	622	237	957	132
Paphos	74	1,990	696	1,527	423
Total	379	8,166	4,292	6,470	2,648
		Moslem Schools.			
Nicosia and Kyrenia	18	210	72	163	56
Larnaca	40	501	259	393	160
Famagusta	6	51	5	34	1
Limassol	8	197	11	30	11
Paphos	14	247	51	128	19
Total	86	1,206	398	748	247
Total Orthodox	379	8,166	4,292	6,470	2,648
Total Moslem	86	1,206	398	748	247
Grand Total	465	9,372	4,690	7,218	2,895

Villagers appear now to appreciate the dental treatment offered to their children and are anxious to give their consent promptly ; school children themselves are willing to have their teeth attended to. This may perhaps be attributed to confidence gained by past years experience. It will be observed that the number of extractions in village schools totals 7,585 as against 4,046 in the previous year or an increase of 77% in spite of the fact that the number of school children requiring treatment (other than extractions) is not included in Table 2 but is embodied in Table 1.

In 151 schools visited for the first time, the Medical Record Card system was adopted with a view to ascertaining the hygienic condition of the mouth of school children. 9,615 school children were examined accordingly and only 1,917 were found to be free from mouth diseases.

The following table shows the percentage :—

Deciduous Teeth		Permanent Teeth	
Sound teeth	*Decayed teeth*	*Sound teeth*	*Decayed teeth*
19%	81%	79%	21%

APPENDIX L.

ANNUAL REPORT ON THE PUBLIC HEALTH WORK AND ACTIVITIES OF THE MUNICIPAL CORPORATION OF LIMASSOL FOR THE YEAR 1937.

FINANCIAL.

Revenue and Expenditure.

	£	s.	p.
1. The total receipts of the Corporation amounted to	22,590	4	7½
Plus—surplus balance on the 1st January, 1937	7,270	0	2¾
Total	£29,860	5	1¼
The total expenditure of the Corporation amounted to ..	£23,422	2	4¾

Contribution to Hospitals and Infant Welfare Centres.

2. A sum of £504. 11*s.* 3*p.* was paid as a contribution to Hospitals and a sum of £93. 18*s.* 3*p.* as a contribution to the Infant Welfare Centre established in Limassol with the authority of the Social Hygiene Council.

Municipal Prophylactic Station against Venereal Diseases.

3. A sum of £157. 4*s.* 0½*p.* was expended for the maintenance of the Municipal Prophylactic Station during the year 1937. The number of attendances at the above station during the year 1937 was 25,564.

Conservancy of the Town.

4. A sum of £2,346. 4*s.* 2¾*p.* was expended for the conservancy of the town, *i.e.* for keeping the streets and public places clean and in good sanitary condition and for anti-mosquito, sanitary and public health work.

Water Supply.

5. The Corporation during the year 1937 incurred a considerable expenditure for the improvement and extension of the water supply thus enabling a considerable number of people to provide their premises with drinking water from the municipal water supply, instead of using well water as heretofore.

The total expenditure incurred by the Corporation during the year 1937 in respect of the water supply amounted to £896. 14*s.* 1½*p.*

Salaries of the Medical Staff, Sanitary Staff, etc.

6. A sum of £881 was paid for the salaries or remuneration of :—
- (*a*) Municipal Medical Officer of Health.
- (*b*) Municipal Engineer.
- (*c*) Surveyor of the Conservancy of the Town.
- (*d*) Municipal Sanitary Inspector.
- (*e*) Inspector of Slaughter-Houses.
- (*f*) Inspectors of Municipal Markets.
- (*g*) Municipal Prophylactic Station Attendant.
- (*h*) Midwives attending poor persons free of charge.

Note.—The wages of 8 Sanitary Labourers regularly employed by the Corporation were included in the item under Head " Conservancy of the Town ".

Miscellaneous.

7. A sum of £576. 2*s.* 1½*p.* was expended as follows :—

(*a*) £21. 1*s.* 0*p.* for the provision of pit-latrines to dwelling-houses owned by poor persons.

(*b*) £429. 7*s.* 1½*p.* for the acquisition of premises at the junction of Eleftheria and Cleopatra Streets for the erection of public latrines and urinals ;

(*c*) £117. 11*s.* 4½*p.* for the burial of dead.

(*d*) £8. 2*s.* 4½*p.* paid as compensation in respect of the destruction of furniture and other articles and clothing contained in buildings wherein persons have died of contagious or infectious diseases.

Acquisition of Land or Premises for Widening Existing Streets, etc.

8. A sum of £824. 16*s.* 0*p.* was paid for the acquisition of land for widening and straightening existing streets.

Maintenance of Poorhouse and other Charities.

9. A sum of £1,066. 18*s.* 7¾*p.* was expended for the maintenance of the Poorhouse and other Charities.

Medical and Sanitary Staff.

10. The Medical and Sanitary Staff employed consists of :—
- (*a*) 1 Municipal Medical Officer of Health.
- (*b*) 1 Medical Officer for the Municipal Prophylactic Station.
- (*c*) 1 Attendant for the Municipal Prophylactic Station.
- (*d*) 1 Surveyor of Conservancy.
- (*e*) 2 Municipal Sanitary Inspectors.
- (*f*) 8 Sanitary Labourers.
- (*g*) 4 Midwives (2 Orthodox-Christians and 2 Moslems).

Note.—The midwives are not whole-time employees of the Corporation.

Total Expenditure for Public Health.

11. The total expenditure relating to public health amounted, as specified in the preceding paragraphs, to £7,347. 9*s.* 2*p.* viz.: about 32% of the total expenditure of the Corporation during the year 1937.

PUBLIC HEALTH.

Housing and Town Planning.

12.—(*a*) 74 new houses were erected which have complied with the sanitary requirements, as far as possible, but taking always into consideration the financial ability and social standing of the owner.

The building regulations were enforced as far as possible.

(*b*) About 136 houses have been repaired.

(*c*) 12 buildings were set back on payment of compensation for widening and straightening existing streets.

(*d*) A plan has been prepared in respect of Saint Andrew Street, showing the future width of the street and the direction that it shall take.

Treatment of Buildings Unfit for Human Habitation.

13.—(*a*) No building was demolished.

(*b*) No building was closed on the ground that it was unfit for human habitation.

The Corporation did not think it advisable to proceed with such an extreme measure, owing to the poverty of the owners.

Scavenging and Refuse Disposal.

14.—(*a*) All the streets and public places in the town were swept and cleaned every day between midnight and 5 a.m.

(*b*) In addition to the above-mentioned general sweeping and cleaning, all the central streets of the town were regularly swept and cleaned during day-time when and where necessary.

Every precautionary measure was taken to avoid raising dust in the carrying out of such sweeping and cleaning.

(*c*) The town refuse was regularly removed from the streets, public places and houses by motor lorries properly covered and specially constructed for the purpose.

(*d*) The town refuse was disposed of in a more or less satisfactory way, although not entirely in a manner consistent with the requirements of sanitation and public health. It is expected, however, that a satisfactory disposal of the town refuse will be secured during the year 1938.

Anti-Mosquito Work.

15.—(*a*) 158,685 inspections of houses were made by the Municipal Medical and Sanitary Staff in order to ascertain whether any mosquito-breeding places existed.

(*b*) 297 notices were served on owners or occupiers of premises where mosquito-breeding places were discovered. In consequence of such notices the mosquito-breeding places complained of were removed. In some cases the Corporation provided black disinfectant free of charge.

(*c*) 43 water tanks and wells were stocked with fish, 90 disused wells were covered, filled in or soiled, and 355 wells were oiled.

(*d*) Drains of a total length of 3,000 feet were dealt with.

Disinfections.

16.—(*a*) 16 disinfections were carried out of houses and of the clothing and contents thereof, wherein persons suffering from contagious or infectious diseases have died or from which they have removed.

(*b*) 1 disinfection was carried out of second-hand articles intended for sale.

Abatement of Nuisances.

17.—(*a*) Notices have been served on 205 owners or occupiers of premises calling upon them to abate the nuisance caused thereon by the accumulation or deposit of filth or other refuse. The great majority of the above owners or occupiers complied with the requirements of such notices. The remaining sites are regularly cleaned by the Corporation.

(*b*) Notices were served on 183 owners or occupiers of premises calling upon them to provide such premises with proper sanitary conveniences. Out of the 183 owners or occupiers, 158 complied with the requirements of such notices.

(*c*) 21 houses owned by poor persons were, at the expense of the Corporation, provided with pit-latrines with a view to avoiding the nuisance which would, but for these pit-latrines, have occurred on such premises.

Inspection of Foodstuffs.

18.—(*a*) All municipal markets and slaughter-houses were regularly inspected by the Municipal Medical Officer of Health.

(*b*) All premises in which foodstuffs or liquids were made or kept or exposed for sale were regularly inspected by the Municipal Medical Officer of Health and the Municipal Sanitary Inspector.

(*c*) All foodstuffs or liquids found in any of the above markets, slaughter-houses or premises which, in the opinion of the Municipal Medical Officer of Health, were unfit for human consumption, were seized and destroyed.

(*d*) The following table shows the quantity of foodstuffs seized and destroyed during the year 1937 :—

Macaroni	about 95 okes.
Tin fish and tin fruit	3,252 tins.
Fresh meat and fresh pork	about 7,525 okes.
Carcasses of slaughtered animals for human consumption	9 carcasses.
Fresh vegetables	29,107 bundles
Fresh fruit	7,884 pieces.
do.	732 okes.
Tomato sauce	39 tins of 1 kg.
do.	about 74 okes.
Dry fruit and pulse	about 2,560 okes.
Becaficos	1,064 pieces.
Potatoes	11,038 okes.
Bread, game and liquids	A considerable quantity was seized and destroyed but no record of the approximate quantity can be given.

Control of Infectious Diseases.

19. The Corporation, with a view to preventing the spreading of infectious diseases, proceeded with the following measures :—

(*a*) The hawking of vegetables and fruits liable to infection was absolutely and strictly prohibited.

(*b*) The sale of second-hand articles was strictly prohibited, unless such articles were previously inspected by the Municipal Medical Officer of Health.

All second-hand articles which, in the opinion of the Municipal Medical Officer of Health ought to be disinfected or destroyed, were in fact disinfected or destroyed, as the case might be.

(*c*) No person employed in any bakery, slaughter-house or in the sale of fresh meat or fesh pork or perishable goods was allowed to carry on his business, unless he obtained a Certificate from the Municipal Medical Officer of Health to the effect that his state of health and physical fitness were such as not to admit of the possible infection of the foodstuffs made, handled or sold by him. 286 Certificates of this nature were given during the year 1937.

(*d*) A record is kept in the Municipal Offices by the Municipal Sanitary Inspector of all persons reported to be suffering from infectious diseases and no permit for the burial of any corpse is granted before each case is fully inquired into by the Municipal Medical Officer of Health or the Municipal Sanitary Inspectors. If the person who died was suffering from any infectious disease then his house and the clothing or articles contained therein were properly disinfected or destroyed, as the case might require.

(*e*) Bacteriological examinations of the drinking water of the Limassol town were made, on the application of the Corporation, by the Government Bacteriologist.

(*f*)—(1) All barber-shops, baths, coffee-houses, hotels, restaurants, pastry-shops, khans, taverns and other premises in which foodstuffs are made or exposed for sale were regularly inspected by the Municipal Medical and Sanitary Staff, in order to ascertain whether the articles used therein were clean and in good sanitary condition. 4,971 inspections were made to that effect. All articles used in barber-shops, such as razors, etc., should, according to the instructions of the Medical and Sanitary Staff, be properly disinfected before each use.

(2) All the owners or occupiers of coffee-houses were required to provide such premises with drinking water from the Municipal water supply, waste water sumps and spittoons. Where possible such owners were required to provide their premises with a sanitary convenience. 10 coffee-houses and bakeries were closed because the owners or occupiers of such premises were unable to comply with the sanitary requirements of the Corporation.

Other sanitary measures were suggested to and imposed on the owners of such premises as far as possible.

(*g*) Black disinfectant and lime are generally supplied by the Corporation to poor persons free of charge.

(*h*) The licensing of dogs was strictly enforced. 151 dogs were destroyed during the year 1937.

Control of Trade and Industries.

20.—(*a*) All factories were inspected by the Medical and Sanitary Staff of the Corporation.

(*b*) No khan was licensed until the owner thereof complied fully with the sanitary requirements imposed by the Law or Bye-laws or with the instructions of the Municipal Medical Officer of Health.

Prosecutions.

21. 508 prosecutions were made, the great majority of which relate to sanitation and health.

APPENDIX M.

TABLE I.

Establisment of the Medical Department during 1937.

Medical Staff.

1 Director of Medical Services.
1 Specialist (Surgeon).
1 Government Pathologist.
1 Government Chemist.
1 Medical Superintendent, Mental Hospital.
3 Honorary Oculists.
1 Honorary Laryngologist.
2 Honorary Radiologists.
4 Honorary Dentists.

3 Travelling Oculists.
6 District Medical Officers.
3 Medical Officers, 1st Grade.
13 Medical Officers, 2nd Grade.
1 School Medical Officer.
3 District Surgeons.
3 Honorary Physicians.
1 Honorary Surgeon.
1 Anaesthetist.

English Nursing Staff.

4 Matrons.

7 Nursing Sisters.

Other Medical and Sanitary Staff.

3 Health Officers.
1 Chief Sanitary Inspector.
6 District Sanitary Inspectors.
7 Sanitary Inspectors, 1st Grade.
17 Sanitary Inspectors, 2nd Grade.
29 Compounders.
1 Housekeeper, Nicosia General Hospital.
6 Staff Nurses.

8 Male Orderlies.
20 Probationer Nurses.
1 Head Warder, Mental Hospital.
14 Mental Hospital Attendants.
3 Guards, Leper Farm.
1 Assistant to Chemist.
1 Assistant to Pathologist.
1 Government Midwife.

Clerical Staff.

1 Clerk, 1st Grade.
1 Clerk, 2nd Grade.

2 Clerks, 3rd Grade.
5 Clerks, 4th Grade.

There are, in addition to the above, Cooks, Servants, Kitchen-boys, House-maids, Ward-maids, Charwomen, Sanitary Labourers, Attendants, Messengers, etc., etc.

The names of the holders of the principal appointments are :—

Dr. E. A. Neff, *Director of Medical Services.*
Dr. C. H. Cuff, *Specialist* (*Surgeon*).
Dr. G. M. Gibbon, *District Medical Officer*, Nicosia.
Dr. W. J. E. Phillips, *District Medical Officer*, Famagusta.
Dr. D. C. Ogilvie, *District Medical Officer*, Limassol.
Dr. C. E. Bevan, *District Medical Officer*, Larnaca.
Dr. R. A. Porter, *District Medical Officer*, Nicosia.
Dr. H. B. A. Macfie, *District Medical Officer*, stationed at Nicosia.
Dr. H. Symeonides, *Medical Officer*, 1st Grade, Nicosia.
Dr. G. M. Pietroni, *Medical Officer*, 1st Grade, Kyrenia.
Dr. Th. Chr. Astreos, *Medical Officer*, 1st Grade, Limassol.
Dr. J. S. Makrides, *Medical Officer*, 2nd Grade, Limassol.
Dr. S. C. Constantinides, *Medical Officer*, 2nd Grade, Paphos.
Dr. J. I. Christodoulides, *Medical Officer*, 2nd Grade, Polis.
Dr. A. P. Economides, *Medical Officer*, 2nd Grade, Lefka.
Dr. Chr. M. Volos, *Medical Officer*, 2nd Grade, Klirou.
Dr. C. Rodosthenis, *Medical Officer*, 2nd Grade, Larnaca.
Dr. M. X. Liassides, *Medical Officer*, 2nd Grade, Kophinou.
Dr. P. Koumas, *Medical Officer*, 2nd Grade, Famagusta.
Dr. M. J. Fterakis, *Medical Officer*, 2nd Grade, Morphou.
Dr. S. S. Pastides, *Medical Officer*, 2nd Grade, Lefkoniko.
Dr. C. P. Kronides, *Medical Officer*, 2nd Grade, Perapedhi.
Dr. H. A. Hikmet, *Medical Officer*, 2nd Grade, Nicosia.
Dr. H. Tahsin, *Travelling Oculist.*
Dr. Mehmed Ali, *Travelling Oculist.*
Dr. Chr. Tornaritis, *Travelling Oculist.*
Miss F. M. E. Pepper, *Matron*, Nicosia General Hospital.
Miss A. Barclay, *Matron*, Limassol Government Hospital.
Miss C. A. Wyeth, *Matron*, Sanatorium.
Mrs. H. H. Hunter, *Matron*, Leper Farm.
Miss L. Seymour, *Nursing Sister*, Limassol Government Hospital.
Miss J. Rudge, *Nursing Sister*, Limassol Government Hospital.
Miss M. H. Sizer, *Nursing Sister*, Nicosia General Hospital.
Miss M. Nicholls, *Nursing Sister*, Nicosia General Hospital.
Miss T. M. Price, *Nursing Sister*, Nicosia General Hospital.
Miss M. M. Milnes, *Nursing Sister*, Nicosia General Hospital.
Miss A. Hodgson, *Nursing Sister*, Nicosia General Hospital.
Mr. Harold Atkinson, *Government Chemist.*
Dr. J. C. Tull, *Government Pathologist.*
Dr. C. S. Markides, *Health Officer.*
Dr. M. Theodoulou, *Health Officer.*
Dr. P. E. Demetriades, *Health Officer.*
Mr. M. Aziz, *Chief Sanitary Inspector.*
Dr. S. Lysandrides, *Medical Superintendent*, Mental Hospital.
Dr. Chr. Kalavros, *Honorary Oculist*, Nicosia Hospital.
Dr. Chr. Tsiros, *Honorary Oculist*, Larnaca Hospital.
Dr. Chr. Makrides, *Honorary Oculist*, Limassol Hospital.
Dr. N. Michaelides, *Medical Officer in charge*, Venereal Clinics.
Dr. Eyioub Nedjimuddin, *School Medical Officer*, Paphos.
Mr. J. G. Marcellos, *Honorary Dentist*, Nicosia and Kyrenia Hospitals.
Mr. V. Diamantides, *Honorary Dentist*, Larnaca Hospital.
Mr. Y. P. Michaelides, *Honorary Dentist*, Limassol Hospital.
Mr. N. Savvides, *Honorary Dentist*, Famagusta Hospital.
Miss Stavroulla M. Georghiadou, *Honorary Dentist*, Paphos Hospital.
Dr. M. Coureas, *Hon. Consulting Physician*, Nicosia General Hospital.
Dr. A. Gavrielides, *Hon. Consulting Surgeon*, Limassol Hospital.
Dr. M. Raouf, *Hon. Physician*, Nicosia General Hospital.
Dr. E. Dikeos, *Hon. Radiologist*, Larnaca Hospital.
Dr. T. Evangelides, *Honorary Physician*, Sanatorium.
Dr. Th. H. Gircotis, *Honorary Ear, Nose and Throat Specialist.*
Dr. P. Haji Eftychiou, *District Surgeon*, Lysi.
Dr. N. Argyrides, *District Surgeon*, Pedhoulas.
Dr. G. M. Avraamides, *District Surgeon*, Agros.
Mr. J. K. Tsangarinos, *Clerk*, 1st Grade.
Mr. H. Shevket, *Clerk*, 2nd Grade.

APPENDIX N.

TABLE II.

FINANCIAL.

MEDICAL DEPARTMENT.

Expenditure, 1937.

	£	s.	p.
Personal Emoluments	24,859	19	6
Other Charges :—			
Wages :—			
Central Hospital, Nicosia	395	18	7
Sanatorium, Nicosia	108	8	6
Limassol Hospital	159	0	0
Leper Farm	465	6	3
Mental Hospital	219	14	2
Government Laboratories	132	0	0
Food, Clothing and Miscellaneous :—			
Central Hospital, Nicosia	2,459	8	7
Sanatorium, Nicosia	1,426	12	5
Limassol Hospital	939	6	1
Mental Hospital	2,078	1	4
Leper Farm	2,318	4	0
Drugs and Surgical Supplies	5,043	15	4
Care of Healthy Children of Lepers	98	16	1
Extra Assistance :—			
Medical	2,212	16	2
Nursing	555	9	1
Prevention of Diseases	7,071	11	2
Rat Destruction	95	19	1
Midwifery	156	0	0
Venereal Clinics	1,348	11	8
Social Work	84	1	4
Chemical and Equipment of Laboratories	296	16	7
The Food and Drugs Law, 1926	16	19	0
Remuneration to Examiners in Pharmacy	4	0	0
Trachoma Nursing Service	159	18	0
Contributions :—			
Local Hospitals	2,218	19	4
Other	275	0	0
Hospital Equipment	175	10	6
Books and Periodicals	37	13	2
Uniforms	183	0	6
Travelling	3,649	1	8
Rent	151	0	6
Lighting, Heating and Electric Power	493	10	4
Training of Medical Department Officials	205	3	2
Incidentals	101	10	2
Maintenance of Ambulance	166	15	2
Special Expenditure :—			
Ambulance	231	19	0
Total	£35,735	19	8
Grand Total	£60,595	19	5

Revenue.

The total revenue of the Medical and Sanitary Department, as shown below, amounted to £5,729. 5*s.* 2*p.*

	£	s.	p.
1. Sale of Medicines	790	2	3
2. Hospital Receipts	2,254	4	2
3. Other	1,484	2	6
4. Chemical and Bacteriological Fees	82	5	3
5. Registration of Diplomas	156	1	0
6. Quarantine Dues and Health Certificates	962	9	6
Total	£5,729	5	2

APPENDIX O.

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1937.

Diseases	In-Patients					Out-Patients	
	Remaining in Hospital at end of 1936	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1937	Male	Female
		Admissions	Deaths				
I. Epidemic, Endemic, and Infectious Diseases.							
1. Enteric Group :—							
(*a*) Typhoid Fever	11	139	28	150	13	77	93
(*b*) Paratyphoid A.	—	11	—	11	—	2	5
(*c*) Paratyphoid B.	—	—	—	—	—	—	—
(*d*) Type not defined	—	—	—	—	—	2	1
2. Typhus	—	—	—	—	—	—	—
3. Relapsing Fever	—	—	—	—	—	—	—
4. Undulant Fever	—	—	—	—	—	—	—
5. Malaria :—							
(*a*) Tertian	8	576	12	584	3	6,270	5,596
(*b*) Quartan	1	41	—	42	—	1,457	1,454
(*c*) Aestivo-autumnal ..	—	84	1	84	1	677	618
(*d*) Cachexia	—	18	3	18	—	792	680
(*e*) Blackwater	—	—	—	—	—	—	—
6. Small-pox :— Alastrim	—	—	—	—	—	—	—
7. Measles	—	—	—	—	—	1	4
8. Scarlet Fever	—	—	—	—	—	—	—
9. Whooping Cough	—	2	—	2	—	202	201
10. Diphtheria	—	9	6	9	—	5	2
11. Influenza	—	152	1	152	—	3,929	2,776
12. Miliary Fever	—	—	—	—	—	—	—
13. Mumps	—	6	—	6	—	12	2
14. Cholera	—	—	—	—	—	—	—
15. Epidemic diarrhœa	—	—	—	—	—	—	—
16. Dysentery :—							
(*a*) Amœbic	—	5	—	5	—	2	1
(*b*) Bacillary	1	5	—	6	—	16	18
(*c*) Undefined or due to other causes	—	1	—	1	—	11	10
17. Plague :—							
(*a*) Bubonic	—	—	—	—	—	—	—
(*b*) Pneumonic	—	—	—	—	—	—	—
(*c*) Septicæmic	—	—	—	—	—	—	—
(*d*) Undefined	—	—	—	—	—	—	—
18. Yellow Fever	—	—	—	—	—	—	—
19. Spirochætosis	—	—	—	—	—	—	—
Ictero-hæmorrhagica	—	—	—	—	—	—	—
20. Leprosy	—	—	—	—	—	13	6
21. Erysipelas	—	35	3	35	—	41	44
22. Acute Poliomyelitis	—	1	—	1	—	1	1
23. Encephalitis Lethargica	—	1	1	1	—	17	13
24. Epidemic Cerebro-spinal Fever ..	5	258	92	263	9	183	134
25. Other Epidemic Diseases :—							
(*a*) Rubeola (German Measles)	—	—	—	—	—	—	—
(*b*) Varicella (Chicken-Pox) ..	—	—	—	—	—	61	53
(*c*) Kala-azar	—	—	—	—	—	—	—
(*d*) Phlebotomus Fever ..	—	1	—	1	—	—	—
(*e*) Dengue	—	—	—	—	—	—	—
(*f*) Epidemic Dropsy	—	—	—	—	—	—	—
(*g*) Yaws	—	—	—	—	—	—	—
(*h*) Trypanosomiasis	—	—	—	—	—	—	—
26. Glanders	—	—	—	—	—	—	—
27. Anthrax	—	6	2	6	—	4	1
28. Rabies	—	—	—	—	—	—	—
29. Tetanus	—	6	4	6	—	3	1
30. Mycosis	—	—	—	—	—	6	1
31. Tuberculosis, Pulmonary and Laryngeal	—	14	1	14	—	167	143
Carried forward	26	1,371	154	1,397	26	13,951	11,858

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1937—*contd.*

Diseases	In-Patients					Out-Patients	
	Remaining in Hospital at end of 1936	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1937	Male	Female
		Admissions	Deaths				
Brought forward	26	1,371	154	1,397	26	13,951	11,858
I. Epidemic, Endemic, and Infectious Diseases—*continued.*							
32. Tuberculosis of the Meninges or Central Nervous System ..	1	3	1	4	—	1	—
33. Tuberculosis of the Intestines or Peritoneum	—	16	3	16	1	16	16
34. Tuberculosis of the Vertebral Column	—	3	1	3	—	2	2
35. Tuberculosis of Bones and Joints	2	18	1	20	1	16	14
36. Tuberculosis of other organs :—							
(*a*) Skin or Subcutaneous Tissue (Lupus)	2	4	—	6	—	3	8
(*b*) Bones	—	—	—	—	—	7	7
(*c*) Lymphatic System ..	1	1	—	2	—	18	7
(*d*) Genito-urinary	—	12	3	12	—	8	2
(*e*) Other organs	—	14	—	14	—	104	157
37. Tuberculosis disseminated :—							
(*a*) Acute	—	—	—	—	—	—	—
(*b*) Chronic	—	—	—	—	—	1	—
38. Syphilis :—							
(*a*) Early	—	8	—	8	—	214	94
(*b*) Late	—	6	1	6	—	222	109
(*c*) Tertiary	—	1	1	1	—	32	3
(*d*) Hereditary..	—	—	—	—	—	15	37
(*e*) Period not indicated ..	—	3	—	3	—	159	13
39. Soft Chancre	—	24	—	24	—	307	39
40. A.—Gonorrhœa & its complications	—	16	—	16	—	933	582
B.—Gonorrhœal Ophthalmia ..	—	—	—	—	—	—	—
C.—Gonorrhœal Arthritis ..	—	7	—	7	—	61	31
D.—Granuloma Venereum ..	—	—	—	—	—	28	6
41. Septicæmia	—	22	11	22	—	65	52
42. Other Infectious Diseases :— Trypanosomiasis	—	—	—	—	—	—	—
II. General Diseases not mentioned above.							
43. Cancer or other malignant Tumours of the Buccal Cavity	2	17	1	19	—	34	42
44. Cancer or other malignant Tumours of the Stomach or Liver ..	—	2	1	2	—	1	4
45. Cancer or other malignant Tumours of the Peritoneum Intestines, Rectum	—	2	—	2	—	4	7
46. Cancer or other malignant Tumours of the Female Genital Organs..	1	75	4	76	2	—	82
47. Cancer or other malignant Tumours of the Breast	1	16	3	17	1	1	11
48. Cancer or other malignant Tumours of the Skin	1	5	—	6	—	12	13
49. Cancer or other malignant Tumours of Organs not specified ..	3	78	5	81	3	16	14
50. Tumours non-malignant	2	45	—	47	3	69	71
51. Acute Rheumatism		66	—	66	—	438	571
52. Chronic Rheumatism	1	13	—	14	—	741	890
53. Scurvy (including Barlow's Disease)	—	—	—	—	—	—	—
54. Pellagra	—	—	—	—	—	—	—
55. Beri-Beri	—	—	—	—	—	—	—
56. Rickets	—	—	—	—	—	1	—
57. Diabetes (not including Insipidus)	1	4	—	5	—	32	10
58. Anæmia :—							
(*a*) Pernicious	2	23	4	25	1	191	173
(*b*) Other Anæmias & Chlorosis	1	14	—	15	—	1,221	1,717
Carried forward	47	1,889	194	1,936	38	18,924	16,642

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1937—*contd.*

Diseases	In-Patients					Out-Patients	
	Remaining in Hospital at end of 1936	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1937	Male	Female
		Admissions	Deaths				
Brought forward	47	1,889	194	1,936	38	18,924	16,642
II. GENERAL DISEASES NOT MENTIONED ABOVE—*continued.*							
59. Diseases of the Pituitary Body ..	—	—	—	—	—	—	—
60. Diseases of the Thyroid Gland :—							
(*a*) Exophthalmic Goitre ..	—	6	—	6	—	7	5
(*b*) Other diseases of the Thyroid Gland, Myxœdema ..	—	1	—	1	—	7	5
61. Diseases of the Para-Thyroid Glands	—	—	—	—	—	—	—
62. Diseases of the Thymus	—	—	—	—	—	—	—
63. Diseases of the Supra-Renal Glands	—	—	—	—	—	9	13
64. Diseases of the Spleen	1	30	5	31	—	146	95
65. Leukæmia :—							
(*a*) Leukæmia	—	3	1	3	—	2	4
(*b*) Hodgkin's Disease	—	—	—	—	—	2	—
66. Alcoholism	—	1	—	1	—	9	15
67. Chronic poisoning by mineral substances (lead, mercury, etc.) ..	—	1	—	1	—	—	—
68. Chronic poisoning by organic substances (Morphia, Cocaine, etc.)	—	—	—	—	—	—	—
69. Other General Diseases :—							
Auto-intoxication	—	1	—	1	—	29	22
Purpura Hæmorrhagica ..	—	—	—	—	—	3	23
Hæmophilia	—	1	—	1	—	4	3
Diabetes Insipidus	—	7	—	7	—	7	3
III. AFFECTIONS OF THE NERVOUS SYSTEM AND ORGANS OF THE SENSES.							
70. Encephalitis (not including Encephalitis Lethargica)	—	2	1	2	—	2	4
71. Meningitis (not including Tuberculous Meningitis or Cerebrospinal Meningitis)	—	13	1	13	—	5	6
72. Locomotor Ataxia	—	2	—	2	—	6	1
73. Other affections of the Spinal Cord	—	3	—	3	—	6	1
74. Apoplexy :—							
(*a*) Hæmorrhage	—	2	3	2	—	29	19
(*b*) Embolism	—	—	—	—	—	—	—
(*c*) Thrombosis	—	4	2	4	—	—	—
75. Paralysis :—							
(*a*) Hemiplegia	—	15	3	15	5	58	41
(*b*) Other Paralyses	—	4	—	4	—	36	27
76. General Paralysis of the Insane ..	—	—	—	—	—	3	—
77. Other forms of Mental Alienation	—	4	—	4	—	45	21
78. Epilepsy	—	5	1	5	—	152	90
79. Eclampsia, Convulsions (non-puerperal) 5 years or over ..	—	—	—	—	—	2	—
80. Infantile Convulsions	—	3	—	3	—	10	3
81. Chorea	—	3	—	3	1	3	4
82. A.—Hysteria	—	12	—	12	—	45	384
B.—Neuritis	1	38	—	39	—	1,437	1,187
C.—Neurasthenia	—	35	—	35	2	350	449
83. Cerebral Softening	—	—	—	—	—	10	5
84. Other affections of the Nervous System, such as Paralysis Agitans	—	7	—	7	—	84	21
85. Affections of the Organs of Vision :—							
(*a*) Diseases of the eye ..	1	48	—	49	—	538	417
(*b*) Conjuctivitis	—	21	—	21	—	3,006	2,921
(*c*) Trachoma	1	26	—	27	—	3,388	2,950
(*d*) Tumours of the eye ..	—	9	—	9	—	1	2
(*e*) Other affections of the eye	1	34	1	35	—	704	967
86. Affections of the Ear or Mastoid Sinus	3	38	1	41	2	1,017	830
Carried forward	55	2,268	213	2,323	48	30,086	27,180

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1937—*contd.*

Diseases	In-Patients					Out-Patients	
	Remaining in Hospital at end of 1936	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1937	Male	Female
		Admissions	Deaths				
Brought forward	55	2,268	213	2,323	48	30,086	27,180
IV. Affections of the Circulatory System.							
87. Pericarditis	—	—	—	—	—	22	22
88. Acute Endocarditis or Myocarditis	—	5	—	5	—	79	130
89. Angina Pectoris	—	1	1	1	—	13	10
90. Other Diseases of the Heart :—	—						
(*a*) Valvular :—							
Mitral	—	30	8	30	1	87	92
Aortic	—	4	1	4	—	18	13
Tricuspid	—	1	—	1	—	4	5
Pulmonary	—	—	—	—	—	3	—
(*b*) Myocarditis	1	19	7	20	1	187	259
91. Diseases of the Arteries :—							
(*a*) Aneurism	—	—	—	—	—	6	3
(*b*) Arterio-Sclerosis	—	12	—	12	—	458	459
(*c*) Other diseases	—	—	—	—	—	11	7
92. Embolism or Thrombosis (non-cerebral)	—	—	—	—	—	1	—
93. Diseases of the Veins :—							
Hæmorrhoids	—	12	—	12	1	140	59
Varicose Veins..	—	17	—	17	—	69	53
Phlebitis	—	1	—	1	—	26	50
94. Diseases of the Lymphatic System :-							
Lymphangitis	—	3	—	3	—	152	92
Lymphadenitis Bubo (non-specific)	4	4	—	8	1	81	46
95. Hæmorrhage of undetermined cause	—	3	—	3	—	23	25
96. Other affections of the Circulatory System	—	—	—	—	—	9	5
V. Affections of the Respiratory System.							
97. Diseases of the Nasal Passages :—							
Adenoids	—	3	—	3	—	91	50
Polypus..	—	—	—	—	—	23	15
Rhinitis..	—	5	—	5	—	195	119
Coryza	—	26	—	26	—	885	535
98. Affections of the Larynx :—							
Laryngitis	—	4	1	4	—	43	29
99. Bronchitis :—							
(*a*) Acute	2	106	5	108	1	1,699	1,484
(*b*) Chronic	—	23	—	23	—	928	669
100. Broncho-Pneumonia	—	47	14	47	—	130	83
101. Pneumonia :—							
(*a*) Lobar	1	93	23	94	5	133	145
(*b*) Unclassified	1	17	4	18	—	13	3
102. Pleurisy, Empyema	3	37	2	40	1	110	108
103. Congestion of the Lungs	—	1	1	1	—	35	12
104. Gangrene of the Lungs	—	—	—	—	—	1	1
105. Asthma	—	23	1	23	—	268	168
106. Pulmonary Emphysema	—	—	—	—	—	27	3
107. Other affections of the Lungs :—							
Hydatid of Lungs	—	2	—	2	1	—	—
Pulmonary Spirochætosis ..	1	—	—	1	—	3	3
VI. Diseases of the Digestive System.							
108. A.—Diseases of the Teeth or Gums:							—
Caries, Pyorrhœa, etc. ..	—	8	—	8	1	643	362
B.—Other affections of the Mouth :-							
Stomatitis	1	1	—	2	—	166	121
Glossitis, etc.	—	3	1	3	—	23	19
Carried forward	69	2,779	282	2,848	61	36,891	32,439

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1937—*contd.*

Diseases	In-Patients					Out Patients	
	Remaining in Hospital at end of 1936	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1937	Male	Female
		Admissions	Deaths				
Brought forward	69	2,779	282	2,848	61	36,891	32,439
VI. DISEASES OF THE DIGESTIVE SYSTEM—*continued.*							
109. Affections of the Pharynx or Tonsils :—							
Tonsillitis	2	79	—	81	—	753	571
Pharyngitis	—	2	—	2	—	117	72
110. Affections of the Oesophagus ..	—	—	—	—	—	42	17
111. A.—Ulcer of the Stomach ..	1	16	2	17	—	78	27
B.—Ulcer of the Duodenum ..	—	7	1	7	3	22	14
112. Other affections of the Stomach :—							
Gastritis	—	133	1	133	—	1,101	1,589
Dyspepsia, etc.	—	43	—	43	—	2,310	2,255
113. Diarrhœa and Enteritis :—							
Under two years	—	4	1	4	—	1,141	892
114. Diarrhœa and Enteritis :—							
Two years and over	—	77	6	77	2	1,222	1,007
Colitis	—	29	—	29	—	278	206
Ulceration	—	1	—	1	—	8	7
114*a*. Sprue	—	—	—	—	—	—	—
115. Ankylostomiasis	—	—	—	—	—	—	—
116. Diseases due to Intestinal Parasites:							
(*a*) Cestoda (Tænia)	—	2	—	2	—	17	7
(*b*) Trematoda (Flukes) ..	—	—	—	—	—	—	—
(*c*) Nematoda (other than Ankylostoma) :—							
Ascaris	—	2	—	2	—	175	145
Trichocephalus dispar ..	—	—	—	—	—	—	—
Trichina	—	—	—	—	—	—	—
Dracunculus	—	—	—	—	—	—	—
Strongylus	—	—	—	—	—	—	—
Oxyuris	—	2	—	2	—	142	130
(*d*) Coccidia	—	—	—	—	—	—	—
(*e*) Other parasites	—	—	—	—	—	8	10
(*f*) Unclassified	—	—	—	—	—	—	—
117. Appendicitis	8	345	3	353	7	341	402
118. Hernia	6	267	7	273	7	654	123
119. A.—Affections of the Anus Fistula, etc.	—	36	1	36	1	111	21
B.—Other affections of the Intestines :—							
Enteroptosis	—	—	—	—	—	52	44
Constipation	—	45	—	45	—	1,115	973
120. Acute Yellow Atrophy of the Liver	—	—	—	—	—	—	—
121. Hydatid of the Liver	1	22	1	23	2	31	13
122. Cirrhosis of the Liver :—							
(*a*) Alcoholic	—	7	2	7	—	8	2
(*b*) Other forms	—	5	1	5	—	24	7
123. Biliary Calculus	—	11	1	11	—	32	21
124. Other affections of the Liver :—							
Abscess	—	10	—	10	1	79	55
Hepatitis	—	11	—	11	1	96	102
Colecystitis	4	23	2	27	—	98	85
Jaundice	—	16	1	16	1	100	47
125. Diseases of the Pancreas	—	—	—	—	—	—	—
126. Peritonitis (of unknown cause) ..	2	15	10	17	1	9	8
127. Other affections of the Digestive System	—	9	4	9	—	138	80
Carried forward	93	3,998	326	4,091	87	47,193	41,371

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1937—*contd.*

Diseases	In-Patients					Out-Patients	
	Remaining in Hospital at end of 1936	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1937	Male	Female
		Admissions	Death				
Brought forward	93	3,998	326	4,091	87	47,193	41,371
VII. Diseases of the Genito-Urinary System (Non-Venereal).							
128. Acute Nephritis	1	48	—	49	1	134	127
129. Chronic	1	24	3	25	1	271	240
130. A.—Chyluria	—	1	1	1	—	—	—
B.—Schistosomiasis	—	—	—	—	—	—	—
131. Other affections of the Kidneys :—							
Pyelitis, etc.	1	16	3	17	1	51	98
132. Urinary Calculus	1	24	—	25	—	96	113
133. Diseases of the Bladder :—							
Cystitis	1	16	—	17	1	99	71
134. Diseases of the Urethra :—							
(*a*) Stricture	1	9	—	10	—	46	8
(*b*) Other	2	6	1	8	1	26	15
135. Diseases of the Prostate :—							
Hypertrophy	—	5	—	5	1	29	—
Prostatitis	—	13	1	13	—	63	—
136. Diseases (non-Venereal) of the Genital Organs of Man :—							
Epididymitis	1	21	—	22	—	32	—
Orchitis..	—	12	—	12	—	60	—
Hydrocele	—	19	—	19	—	63	—
Ulcer of Penis	—	13	—	13	—	18	—
137. Cysts or other non-malignant Tumours of the Ovaries ..	—	8	3	8	—	—	33
138. Salpingitis :—							
Abscess of the Pelvis	3	86	1	89	2	—	142
139. Uterine Tumours (non-malignant)	1	20	1	21	—	—	52
140. Uterine Hæmorrhage (non-puerperal)	—	60	—	60	1	—	276
141. A.—Metritis	—	38	—	38	1	—	427
B.—Other affections of the Female Genital Organs :—							
Displacements of Uterus ..	—	2	—	2	—	—	70
Amenorrhœa	—	—	—	—	—	—	143
Dysmenorrhœa..	—	1	—	1	—	—	230
Laucorrhœa	—	—	—	—	—	—	22
142. Diseases of the Breast (non-puerperal :—							
Mastitis	—	18	—	18	1	—	144
Abscess of Breast	—	11	—	11	—	—	46
VIII. Puerperal State.							
143. A.—Normal Labour	15	434	1	449	14	—	175
B.—Accidents of Pregnancy :—							
(*a*) Abortion	3	142	2	145	—	—	100
(*b*) Ectopic Gestation.. ..	—	7	1	7	1	—	—
(*c*) Other accidents of Pregnancy	—	25	2	25	—	—	108
144. Puerperal Hæmorrhage	—	3	—	3	—	—	8
145. Other accidents of Parturition ..	—	15	5	15	—	—	10
146. Puerperal Septicæmia	5	11	4	16	1	—	14
147. Phlegmasia Dolens..	—	—	—	—	—	—	—
148. Puerperal Eclampsia	—	—	—	—	—	—	1
149. Sequelæ of Labour..	—	1	—	1	—	—	2
150. Puerperal affections of the Breast	—	—	—	—	—	—	16
Carried forward	129	5,107	355	5,236	114	48,181	44,062

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1937—*contd.*

Diseases	In-Patients					Out-Patients	
	Remaining in Hospital at end of 1936	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1937	Male	Female
		Admissions	Deaths				
Brought forward	129	5,107	355	5,236	114	48,181	44,062
IX. Affections of the Skin and Cellular Tissues.							
151. Gangrene	1	18	4	19	2	126	101
152. Boil :—							
Carbuncle	—	30	1	30	—	1,114	790
153. Abscess :—							
Whitlow	1	41	1	42	—	388	198
Cellulitis	7	229	6	236	—	684	367
154. A.—Tinea	—	17	—	17	—	145	149
B.—Scabies	—	4	—	4	—	1,266	953
155. Other Diseases of the Skin :—							
Erythema	—	2	—	2	—	181	165
Urticaria	—	7	—	7	—	134	132
Eczema..	—	3	—	3	—	517	449
Herpes	—	—	—	—	—	162	97
Psoriasis	—	1	—	1	—	88	86
Elephantiasis	—	—	—	—	—	2	1
Myiasis	—	—	—	—	—	—	—
Chigoes	—	—	—	—	—	—	—
Cutaneous Leishmaniasis ..	—	—	—	—	—	2	1
Other	1	1	—	2	—	185	63
X. Diseases of Bones and Organs of Locomotion (other than Tuberculous).							
156. Diseases of Bones :—							
Osteitis	3	28	—	31	1	73	82
157. Diseases of Joints :—							
Arthritis	1	26	1	27	—	259	299
Synovitis	—	2	—	2	—	21	14
158. Other Diseases of Bones of Organs of Locomotion	1	10	—	11	1	217	249
XI. Malformations.							
159. Malformations :—							
Hydrocephalus	—	—	—	—	—	2	—
Hypospadias	—	1	—	1	—	3	—
Spina Bifida, etc.	—	1	—	1	—	5	2
Other malformations	—	3	—	3	—	13	2
XII. Diseases of Infancy.							
160. Congenital Debility	—	1	—	1	—	9	12
161. Premature Birth	—	1	—	1	—	1	—
162. Other affections of Infancy ..	—	7	—	7	—	4	7
163. Infant neglect (infants of three months or over)	—	—	—	—	—	—	—
XIII. Affections of Old Age.							
164. Senility :—							
Senile Dementia	1	—	1	1	—	12	18
XIV. Affections produced by External Causes.							
165. Suicide by Poisoning	—	1	—	1	—	1	—
166. Corrosive Poisoning (intentional)..	—	3	—	3	—	1	—
167. Suicide by Gas Poisoning ..	—	—	—	—	—	—	—
168. Suicide by Hanging or Strangulation	—	—	—	—	—	1	3
169. Suicide by Drowning	—	—	—	—	—	2	—
170. Suicide by Firearms	—	—	—	—	—	—	—
171. Suicide by cutting or stabbing Instruments	—	3	—	3	—	—	—
172. Suicide by jumping from a height	—	—	—	—	—	3	—
173. Suicide by crushing	—	—	—	—	—	3	—
174. Other Suicides	—	—	—	—	—	—	—
Carried forward	145	5,547	369	5,692	118	53,805	48,302

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1937—*contd.*

Diseases	In-Patients					Out-Patients	
	Remaining in Hospital at end of 1936	Yearly Total: Admissions	Yearly Total: Deaths	Total Cases treated	Remaining in Hospital at end of 1937	Male	Female
Brought forward	145	5,547	369	5,692	118	53,805	48,302
XIV. Affections produced by External Causes—*contd.*							
175. Food Poisoning :—							
Botulism	1	9	—	10	—	20	10
176. Attacks of poisonous animals :—							
Snake Bite	—	7	1	7	—	12	11
Insect Bite	—	1	—	1	—	6	14
177. Other accidental Poisonings ..	1	2	—	3	—	2	1
178. Burns (by Fire)	2	18	4	20	—	90	73
179. Burns (other than by Fire) ..	1	22	1	23	—	90	73
180. Suffocation (accidental)	—	—	—	—	—	—	—
181. Poisoning by Gas (accidental) ..	—	—	—	—	—	—	—
182. Drowning (accidental)	—	—	—	—	—	4	3
183. Wounds (by Firearms, war excepted)	—	13	2	13	1	10	2
184. Wounds (by cutting or stabbing Instruments)	4	202	3	206	1	1,045	379
185. Wounds (by fall)	—	58	2	58	—	734	421
186. Wounds (in Mines or Quarries) ..	—	2	—	2	—	23	3
187. Wounds (by Machinery)	—	6	—	6	—	24	3
188. Wounds (crushing, *e.g.* railway accidents, etc.)	—	3	—	3	—	77	4
189. Injuries inflicted by Animals, Bites, Kicks, etc.	—	17	—	17	—	94	59
190. Wounds inflicted on Active Service	—	—	—	—	—	—	—
191. Executions of civilians by belligerents	—	—	—	—	—	—	—
192. A.—Over fatigue	—	—	—	—	—	14	—
B.—Hunger or Thirst	—	—	—	—	—	4	—
193. Exposure to Cold, Frost bite, etc.	—	1	—	1	—	87	56
194. Exposure to Heat :—							
Heatstroke	—	—	—	—	—	—	—
Sunstroke	—	1	—	1	—	3	—
195. Lightning Stroke	—	—	—	—	—	5	2
196. Electric Shock	—	1	—	1	—	1	—
197. Murder by Firearms	—	—	—	—	—	2	—
198. Murder by cutting or stabbing Instruments	—	1	1	1	—	7	—
199. Murder by other means	—	—	—	—	—	1	—
200. Infanticide (Murder of an infant under one year)	—	—	—	—	—	1	—
201. A.—Dislocation	1	30	—	31	—	54	32
B.—Sprain	1	8	—	9	—	145	43
C.—Fracture	12	265	13	277	11	188	75
202. Other external Injuries	—	163	—	163	8	1,128	492
203. Deaths by Violence of unknown cause	—	—	—	—	—	5	—
XV. Ill-defined Diseases.							
204. Sudden Death (cause unknown) ..	—	—	—	—	—	1	1
205. A.—Diseases not already specified or ill-defined :—							
Ascites	3	15	1	18	—	38	47
Oedema	—	—	—	—	—	4	5
Asthenia	—	12	1	12	1	409	541
Shock	—	8	—	8	—	—	—
Hyperpyrexia	3	9	—	12	—	25	19
B.—Malingering	—	—	—	—	—	320	7
XVI. Diseases, the total of which have not caused ten Deaths	—	—	—	—	—	69	39
Total	174	6,421	398	6,595	140	58,547	50,717